



Shady Hills Energy Center, LLC Shady Hills Combined Cycle Facility Project Environmental Assessment

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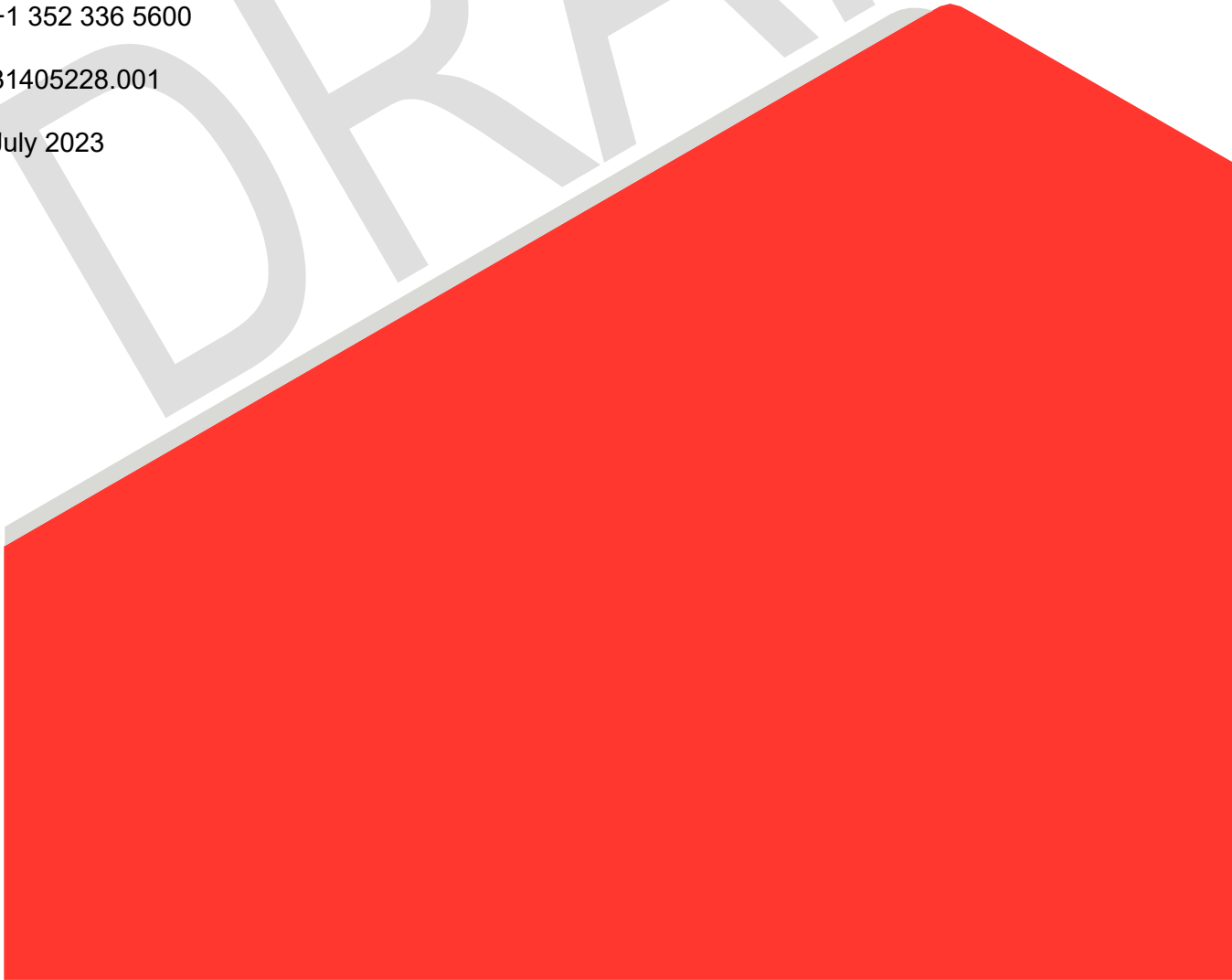
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Executive Summary

The Shady Hills Combined Cycle Facility Project (SHCCF Project or Project) will be located in Pasco County, Florida, and will comprise a 573-megawatt (MW) (winter) natural gas-fired combined cycle generating facility and an associated 230-kV interconnection tie-line. The SHCCF Project will be constructed, owned, and operated by Shady Hills Energy Center, LLC (SHEC), a subsidiary of Seminole Electric Cooperative, Inc (Seminole).

The SHCCF Project will consist of a single combined cycle combustion turbine system equipped with advanced emission control equipment and will include a new approximately 0.6-mile 230-kV interconnection tie-line and temporary construction parking and laydown area. On-site associated facilities will include a natural gas metering station and short lateral to be constructed, owned, and operated by Florida Gas Transmission, and reclaimed water, sanitary sewer, and potable water conveyance infrastructure.

The U.S. Department of Agriculture (USDA), Rural Development administers rural utilities programs through the Rural Utilities Service (RUS). The Applicant (Seminole) plans to apply for a Project loan from the USDA, RUS to finance construction of the proposed SHCCF Project. RUS has determined that a loan for the Project would be a federal action and is therefore subject to National Environmental Policy Act (NEPA) review (42 United States Code [USC] 4321 et seq.; 7 Code of Federal Regulations [CFR] 1970.8(c)). RUS has further determined that preparation of an Environmental Assessment (EA) is required to evaluate the Applicant's planned request for financing (7 CFR 1970.9).

The EA must meet the requirements of the US Department of Agriculture (USDA), Rural Utilities Service (RUS) Bulletin 1794a-600, the National Environmental Policy Act (NEPA), and Council on Environmental Quality requirements for implementing the provisions of NEPA (40 CFR Parts 1500 through 1508). This Environmental Assessment has been written in accordance with the Council on Environmental Quality regulations and follows the format specified by RUS.

This EA includes an explanation of the purpose and need for the proposed action and a review of the alternatives considered by Seminole. Seminole determined that the power supplied by the SHCCF was part of the least cost alternative for meeting Seminole's need for additional generating capacity in light of the increasing energy demands of its Member cooperatives and their customers. Seminole is committed to the construction of the SHCCF and has entered into binding commercial agreements for the construction of the facility. As a result, Seminole will proceed with the construction and operation of the SHCCF – and any associated impacts will occur – irrespective of and even in the absence of RUS financing.

The EA also includes a discussion of the environmental impacts of the proposed action. The SHCCF Project as proposed will have no significant impact on existing land use, the surrounding community, archaeological and historic resources, or threatened and endangered species. The SHCCF Project will comply with all applicable state and federal air pollution regulations. Lastly, the SHCCF Project is located outside of sensitive lands and areas of concern, such as rivers, lakes, wetlands, floodplains, natural vegetation communities, wells, potable water supply wellfields, coastal high hazard areas, and evacuation routes. The construction and operation will not impact federal or state lands, scenic rivers, wetlands or outstanding waters of the state.

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List of Acronyms and Abbreviations

AAQS	Ambient Air Quality Standards
APE	area of potential effect
BACT	Best Available Control Technology
BMPs	Best Management Practices
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent emissions
CRAS	cultural resource assessment survey
CTG	combustion turbine generator
dB	Decibels
DEF	Duke Energy Florida
DHR	Florida Division of Historical Resources
DLN	Dry low-NO _x
EA	Environmental Assessment
eGRID	Emissions & Generation Resource Integrated Database
EIA	U.S. Energy Information Administration
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDEO	Florida Department of Economic Opportunity
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FGT	Florida Gas Transmission
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
FPSC	Florida Public Service Commission
F.S.	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission
GHG	greenhouse gas
GIS	geographic information systems
GSU	generator step-up transformer
GWP	Global Warming Potential
H ₂ SO ₄	sulfuric acid
HAP	hazardous air pollutant
hp	horsepower
HRSG	heat recovery steam generator
kg	kilograms
km	kilometer
kV	kilovolts
L50	sound pressure level exceeded 50 percent of the time
L90	sound pressure level exceeded 90 percent of the time
lb/MWh	pounds per megawatt-hour

LDC	Land Development Code
MGD	million gallons per day
MGY	million gallons per year
MMBtu/hr	million British thermal units per hour
MW	Megawatt
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
PCMRs	Pasco County Master Reuse System
PM ₁₀	particulate matter with an aerodynamic diameter of 10 micrometers or less
PM _{2.5}	particulate matter with an aerodynamic diameter of 2.5 micrometers or less
PPA	power purchase agreement
Ppm	parts per million
PPSA	Florida Electrical Power Plant Siting Act
PSD	Prevention of Significant Deterioration
ROW	right-of-way
SR	State Road
SCA	Site Certification Application
SCR	selective catalytic reduction
SHCCF	Shady Hills Combined Cycle Facility
SHEC	Shady Hills Energy Center, LLC
SHGS	Shady Hills Generating Station
SHPC	Shady Hills Power Company
SHWTF	Shady Hills Wastewater Treatment Facility
SWFWMD	Southwest Florida Water Management District
SO ₂	sulfur dioxide
STG	steam turbine generator
SWPPP	Storm Water Pollution Prevention Plan
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
WWTP	wastewater treatment plant
ZLD	zero liquid discharge

1.0 PURPOSE AND NEED

1.1 Project Description

The Shady Hills Combined Cycle Facility (SHCCF Project or Project) involves the construction and operation of a new, state-of-the-art, natural gas-fired 573 megawatt (MW) (winter), combined-cycle generating facility and associated 230-kV interconnection tie-line. The SHCCF Project is proposed for ~14 acres on land owned by Shady Hills Energy Center, L.L.C. (SHEC) in Shady Hills, Pasco County, Florida, approximately 30 miles north of Tampa and approximately 4.7 miles south of the Pasco / Hernando County line (see Figure 1). The SHCCF Site is located on Merchant Energy Way, north of Hudson Avenue, east of Pasco County's Shady Hills Wastewater Treatment Facility and south of the Pasco County Solid Waste Resource Recovery Facility (see Figure 2). The area is currently vacant and undeveloped and was previously used as temporary laydown and equipment storage for the existing and adjacent Shady Hills Generating Station (SHGS). The SHCCF Project will consist of a single combined cycle combustion turbine system equipped with advanced emission control equipment and includes a new approximately 0.6-mile 230-kV interconnection tie-line and ~ 25 acres of temporary construction parking and laydown area on an adjacent property owned by Seminole. On-site associated facilities include a natural gas metering station and lateral to be constructed, owned, and operated by Florida Gas Transmission (FGT), and reclaimed water, sanitary sewer, and potable water conveyance infrastructure. The SHCCF Site will be located adjacent to and east of the existing SHGS. The existing SHGS has been in operation since 2002.

Seminole is committed to the construction of the SHCCF and has entered into binding commercial agreements for the construction of the facility. As a result, Seminole will proceed with the construction and operation of the SHCCF – and any associated impacts will occur – irrespective of and even in the absence of RUS financing

1.1.1 Overview of the SHCCF Project

The SHCCF Project will be an advanced class combustion gas turbine, one-on-one ("1x1") configuration, 573 MW (winter) combined-cycle power plant. The configuration will include one combustion turbine generator (CTG), one heat recovery steam generator (HRSG), one steam turbine generator (STG), and one generator step-up transformer (GSU). The SHCCF Project also includes one auxiliary boiler, one emergency generator, one fire pump, and one cooling tower.

The SHCCF will burn natural gas in the combined cycle combustion turbine and in the auxiliary boiler. Natural gas will be transported to the SHCCF by the pipeline lateral owned and operated by FGT. The SHCCF will be connected to a new natural gas metering station and to the existing 12" Shady Hills gas lateral owned by FGT. Emissions of nitrogen oxides (NOx) will be controlled using dry low NOx (DLN) combustion technology and selective catalytic reduction (SCR).

An overview of the SHCCF Project follows:

- a) An approximately 0.6-mile interconnection tie-line to a new Duke Energy Florida (DEF) substation. The substation will be designated Hudson North and will be constructed, owned and operated by DEF. The substation will connect the SHCCF to the DEF 230 kilovolt (kV) high voltage transmission grid in Pasco County, Florida. DEF does not intend to seek federal funding for the new substation.
- b) The SHCCF will include electrical equipment enclosures; a mechanical draft cooling tower; an exhaust stack; an administration building that will include a control room and maintenance area; a warehouse; parking; a diesel-fired emergency fire water pump; a diesel-fired emergency generator; one or more aboveground diesel fuel storage tanks; an aboveground service/fire water storage tank; one or more aqueous ammonia tanks; a

step-up transformer; potable water and sanitary wastewater conveyance infrastructure; reclaimed water treatment facilities; and a zero liquid discharge (ZLD) system.

- c) Water uses for SHCCF will include cooling, process, service, fire, irrigation and potable water. The primary water source for power generation purposes will be reclaimed water from the Pasco County Master Reuse System (PCMRS), which includes the adjacent Shady Hills Wastewater Treatment Facility (SHWWTF). If reclaimed water is not available at the required quality or quantity, potable water from the Pasco County Municipal Water Supply system will provide backup water supply. Off-Site conveyance systems to connect the SHCCF to the SHWWTF and the PCMRS to support the use of reclaimed water and county water and wastewater treatment systems will be constructed to support the SHCCF Project. Potable water, firewater and sanitary sewer services will be provided by the Pasco County Utilities Division.
- d) A temporary construction parking and laydown area (~ 25 acres) will be located adjacent to and east of the SHCCF. The area will be used for construction parking, equipment and materials storage and location of office trailers and sanitary facilities. Stormwater runoff management systems will be provided to control stormwater runoff and temporary sediment and erosion impacts.

Construction activities for the SHCCF are anticipated to begin August 2023, with targeted commercial operation in December 2026.

1.2 Permit History

In Florida, pursuant to the Florida Electrical Power Plant Siting Act (PPSA), the Florida Department of Environmental Protection (FDEP) is designated as the lead agency to coordinate the review and impact assessment of any new electrical power generating project as defined in Section 403.503, Florida Statutes (F.S.). In accordance with the PPSA, FDEP undertook a comprehensive review of the proposed SHCCF Project. The review included an assessment of the Project's compliance with state, regional and local statutory and administrative requirements by various state agencies and Pasco County. The review resulted in certification (approval) of the Project with conditions that were included in the Conditions of Certification issued by the FDEP (See Appendix A, Final Order and Conditions of Certification # PA 18-59).

The FDEP concluded that the SHCCF is not reasonably projected to cause or contribute to a violation of ambient air quality standards or PSD increments, or water quality standards. The Department found that certification of the SHCCF would effect a reasonable balance between the need for the SHCCF, as determined by the Public Service Commission (PSC), and minimal impacts on air and water quality, fish and wildlife, water resources and other natural resources of the State that would result from the construction and operation of the SHCCF. The FDEP concluded that, if constructed and operated in accordance with the evidence presented in the record and the Conditions of Certification, the SHCCF will serve and protect the broad interests of the public and should be approved.

A number of state and local agencies conducted reviews and issued reports and/or determinations as part of the PPSA site certification process. They include the following (See Appendix B-1 – FDEP Project Analysis Report):

Florida Public Service Commission (FPSC)

The FPSC issued a determination of need on May 25, 2018.

Southwest Florida Water Management District (SWFWMD)

There are no required water use permits associated with the SHCCF and no recommended Conditions of Certification. SWFWMD issued a final report regarding its assessment on July 31, 2018.

Florida Fish and Wildlife Conservation Commission (FWC)

The FWC acknowledged that “the SHCCF project site does not contain significant areas of preferred habitat for nesting, roosting, or foraging by state-listed wildlife species”. On August 23, 2018, the FWC recommended approval of the SHCCF.

Florida Department of Transportation (FDOT)

The FDOT issued its agency report on August 24, 2018 and noted that “with the exception of construction related traffic, there are no apparent impacts to the State Highway System”.

Florida Department of Economic Opportunity (FDEO)

The FDEO issued its agency report on August 24, 2018 and indicated that the SHCCF project does not raise any land use issues of concern and the project is consistent with the uses allowed in Pasco County and the goals of the State Comprehensive Plan.

Florida Department of State Division of Historical Resources (DHR)

In connection with its review of a prior proposed project on the same site, the Department of State Division of Historical Resources (DHR) issued a letter of concurrence on September 20, 2012 stating there were no indications of significant archaeological or historical resources recorded in the SHCCF Project area. The letter of concurrence was based on DHR’s review of relevant Cultural Resource Assessment Surveys (CRASs). Additional CRASs were subsequently conducted for the Project Site, tie-line corridor and temporary parking and laydown area. All the CRASs concluded that the Project would have no adverse effects on cultural resources. The DHR filed its agency report on August 27, 2018 and stated that “all current matters regarding historical resources have been addressed”. The DHR also concurred with the finding of the subsequent 2019 interconnection tie-line extension CRAS report that the project would have no adverse impacts on cultural resources.

Pasco County

Pasco County issued its agency report on August 31, 2018, and its amended agency report on September 10, 2018. The County recommended approval and found the project consistent with applicable County ordinances, regulations, standards and criteria.

Based on all of the above, FDEP issued an order certifying approval of the Project on December 3, 2018. As part of the order, FDEP issued an extensive set of Conditions of Certification, which were reissued in amended form on April 3, 2019.

In addition, FDEP (acting pursuant to delegated federal authority) issued a Prevention of Significant Deterioration (PSD) Air Construction Permit on July 27, 2018 and reissued the permit on February 15, 2023 (See Appendix B-2 and B-3).

In addition to these state and local permits and approvals, the U.S. Fish and Wildlife Service (USFWS) reviewed the project for potential impacts to federally-listed endangered and threatened species. The Service determined that the project was not likely to result in take of any federally-listed species but recommended that project plans incorporate the Standard Measures for the Eastern Indigo Snake (See Appendix B-4). The Service has recently

confirmed that the Project may affect but is not likely to adversely affect any federally-listed species. (See Appendix B-4).

1.3 Need for the Proposed Project

Seminole is a not-for-profit rural electric cooperative organized under Chapter 425, Florida Statutes, and provides wholesale electric power to its nine Member cooperatives. The Member cooperatives, in turn, distribute the electricity to their retail, residential, commercial, and industrial consumers. Seminole's nine Member cooperatives provide electricity to approximately 1.9 million people and businesses within 42 of Florida's 67 counties. Seminole serves its Members' system load needs with a combination of owned generation and power purchase contracts.

In 2016-17 Seminole undertook an extensive review of its need for increased generation capacity to meet projected increases in the demand for energy from Seminole's members and their customers as well as alternatives to address that need. That review culminated in a plan that included power from the SHCCF but which also included the addition of renewables and which allowed the shutdown of a coal-fired unit.

The review of alternatives was initiated when Seminole issued an RFP on March 31, 2016, for up to 600 MW of power starting in June 2021, with needs up to 1,000 MW by June 2022. Seminole's RFP was open to all parties, resulting in over 200 proposals that reflected a wide spectrum of alternatives.

Seminole's evaluation of alternatives was based on a number of factors, including transmission availability, fuel accessibility and availability, build and construction risks, technological and commercial risks, cost, environmental factors, credit capabilities, term flexibility, and scheduling flexibility.

Among the hundreds of proposals Seminole received were a number that included a variety of renewable sources of generation, including landfill gas, waste-to-energy, wind, and battery storage as well as solar power. Seminole rejected all of the non-solar renewable energy proposals because they were not cost-effective as compared to other proposals, and Seminole's generation portfolio already incorporated various renewable generation resources. For example, in terms of winter capacity, biomass facilities accounted for 13 MW of Seminole's energy mix, landfill gas-to-energy facilities for 16.8 MW, and waste-to-energy facilities for 58 MW, in addition to 2.2 MW of summer solar photovoltaic (PV) capacity.

Seminole further considered the proposals for solar power. Seminole determined that as a winter-peaking utility, its highest demand occurs when solar energy is not a viable capacity source. Seminole ultimately included in the selected portfolio a solar facility that would provide 40 MW of summer capacity, while concluding that additional renewable energy is not reasonably available to mitigate Seminole's needs for reliable generation capacity.

SHCCF was identified as a key element of the most reliable and cost-effective option for Seminole to address its Members' need for additional generating capacity to support anticipated load growth, which enabled Seminole's removal of a coal unit in order to reduce emissions. Seminole's analyses concluded that the resource plan containing the SHCCF as well as the recently-constructed Seminole Combined Cycle Facility (SCCF) is the most cost-effective alternative to meet Seminole's capacity needs and would result in projected net present value savings of approximately \$363 million as compared to the next ranked alternative over the study period. The selected resource plan also includes multiple PPAs with significant optionality in terms of available capacity in recognition of the energy value of solar and a new solar resource. This alternative provides Seminole a hedge against economic downturns or faster/slower load growth rates. Seminole's analysis of the proposals was reviewed by an independent evaluator, whose analysis corroborated Seminole's conclusions.

A key aspect of the selected resource plan is that, with the inclusion of the SHCCF as well as the SCCF, it provides Seminole with the flexibility to offset for any emissions associated with the SHCCF and the SCCF by shutting down of one of the 638 MW coal-fired units at the Seminole Generating Station without adversely affecting long-term reliability considerations. The shutdown of the coal-fired unit – which is scheduled to occur around the end of 2023 – will substantially offset any emissions of greenhouse gases associated with Seminole’s need to increase generating capacity to meet increasing demand from its members and their customers.

The FPSC reviewed Seminole’s need for the Project, issuing a determination of need for the SHCCF on May 25, 2018 (See Appendix C - Public Service Commission Determination of Need) which confirmed that by providing the capacity necessary to meet Seminole’s reliability criteria, the 573 MW (winter) of generating capacity associated with the SHCCF will contribute to the reliability and integrity of Seminole’s system. The Commission noted that in making its determination, it is statutorily required to take into account “the need for adequate electricity at a reasonable cost, the need for fuel diversity and supply reliability, whether the proposed plant is the most cost-effective alternative available, and whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available.” The FPSC found that renewable energy resources are incorporated into Seminole’s system planning to the extent reasonably available and that there are no renewable energy sources and technologies reasonably available that would mitigate the need for the SHCCF.

1.4 Purpose and Need

The purpose of the Project is to provide Seminole with an additional 573 MW of generating capacity to meet the increasing energy demands of its Member cooperatives. Seminole plans to finance up to 100 % of the total cost of the project through RUS’s loan program as authorized under the Rural Electrification Act. The Rural Electrification Act of 1936, as amended (7 United States Code [USC] §§901 et seq.), authorizes the Secretary of Agriculture to make loans for rural electrification and for the purpose of furnishing and improving electric and telephone service in rural areas.

USDA, Rural Development is a mission area that includes three federal agencies – Rural Business-Cooperative Service, Rural Housing Service, and Rural Utilities Service. The agencies have in excess of 50 programs that provide financial assistance and a variety of technical and educational assistance to eligible rural and tribal populations, eligible communities, individuals, cooperatives, and other entities with a goal of improving the quality of life, sustainability, infrastructure, economic opportunity, development, and security in rural America. Financial assistance can include direct loans, guaranteed loans, and grants in order to accomplish program objectives.

The Applicant (Seminole) plans to apply for a loan from the USDA, RUS to finance construction of the proposed SHCCF Project. RUS has determined that a loan for the Project would be a federal action and is therefore subject to National Environmental Policy Act (NEPA) review (42 United States Code [USC] 4321 et seq.; 7 Code of Federal Regulations [CFR] 1970.8(c)). RUS has further determined that preparation of an environmental assessment (EA) is required to evaluate the Applicant’s planned request for financing (7 CFR 1970.9).

The proposed Federal Action is for RUS to provide a loan/financing to Seminole to support the construction of the SHCCF Project.

2.0 ALTERNATIVES

2.1 The Preferred Alternative

The SHCCF Project will be an advanced class combustion gas turbine, one-on-one (“1x1”) configuration, 573 MW (winter) combined-cycle power plant. The configuration will include one combustion turbine generator (CTG), one heat recovery steam generator (HRSG), one steam turbine generator (STG), and one generator step-up transformer (GSU). The SHCCF Project also includes one auxiliary boiler, one emergency generator, one fire pump, and one cooling tower.

The SHCCF will burn natural gas in the combined cycle combustion turbine and in the auxiliary boiler. Natural gas will be transported to the SHCCF by a pipeline lateral owned and operated by FGT. The SHCCF will be connected to a new natural gas metering station which will be connected to a gas lateral owned by FGT. Emissions of nitrogen oxides (NOx) will be controlled using dry low NOx (DLN) combustion technology and selective catalytic reduction (SCR).

The project as proposed has been approved by the FDEP. The FDEP and a number of local and state agencies concluded that, if constructed and operated in accordance with the evidence presented in the record, the SHCCF will serve and protect the broad interests of the public.

2.2 Other Alternatives Evaluated and Not Carried Forward

The following actions were considered as part of the NEPA process but were eliminated from detailed study.

Alternative sites were not evaluated. The factors leading to the elimination of alternative sites from consideration include the following:

- SHEC/SHCCF owns the site of the preferred alternative.
- The site has already been approved by Pasco County for use for power generation through the adoption of a Special Exception.
- The State of Florida has already approved the construction of a power plant on the site through the issuance of a Certification Order pursuant to the State Power Plant Siting Act.
- The site provides ready access to a reliable water source – reclaimed water from Pasco County’s Master Reuse System – which is critical for plant operations.
- If Seminole were to abandon the use of this site for power generation and seek an alternative site, it would lose millions of dollars and would experience substantial delays in achieving the 573 MW of additional generation capacity that the Project will provide on this site, which Seminole had expected to already be in service.

Other means of generating energy at the site were considered for purposes of this EA but were eliminated from further consideration due to the power generation needs (573 MW).

Solar generation requires approximately 5 acres/MW. The SHCCF site is ~ 14 acres which is insignificant to generate the required generation. Wind generation is not viable for power generation in the state of Florida due to limited wind resources. Nuclear generation was not considered due to limited land and the proximity of commercial and residential properties. Lastly, geothermal energy was not considered due to the energy needs and limited resources. The most practicable and cost-effective means of providing 573 MW of additional generating capacity at the site is through construction of the SHCCF.

2.3 No Action Alternative

Seminole is seeking RUS financing for the Project in order to approve the affordability of energy for its Member cooperatives and their customers. For the purposes of this EA RUS has evaluated a “no build” scenario. A “no build” scenario in which the SHCCF was not constructed would not meet the purpose and need for the Project and would result in substantial costs for Seminole as well as significant delays in adding needed generation capacity.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter provides descriptions of the existing environmental conditions of the areas that may be impacted by construction and/or operation of the SHCCF Project. The chapter provides an understanding of the affected environment and potential environmental consequences of the Project for the following resources: air quality; land use; biological resources including vegetation and wildlife, geology and soils; water resources; cultural resources; noise transportation, public health and safety; socioeconomics and environmental justice; visual resources; and water resources.

The SHCCF Project Site is located within unincorporated Pasco County, Florida. Land uses surrounding the SHCCF Site include a mixture of industrial/utility and vacant lands. Figure 5 depicts an area map with 1-, 2-, 3-, 4-, and 5-mile radii around the Site for state, county, and municipal jurisdictions, respectively. The Shady Hills Generating Station, a substation and electrical transmission lines, a Florida Gas Transmission natural gas pipeline, and the Shady Hills Waste Water Treatment Facility are located to the west of the proposed Site. The Pasco County Solid Waste and Resource Recovery Facility is located north of the Site with vacant lots and a warehouse to the south.

There are no federally-governed regional, scenic, cultural or natural landmarks within a five-mile radius of the Site. The project site has not been identified as Important Farmland or Prime Rangeland. There is one state-owned preserve, four Pasco County parks and several County conservation areas and preserves within five miles of the Site (Figure 4). There are three conservation areas (e.g., Ecological Planning Units which have established methods for protection and conservation due to their ecological significance that are located within one mile of the Site: Anclote/Cotee Watersheds, Crossbar Sandhills, and Hernando Sandhills. These areas are outside of the Site and outside of the one-mile radius from the Site.

Project and construction-related activities will be contained within the Project footprint and will comply with all applicable laws and regulations associated with the proposed activities. The Project will not result in adverse light, noise, or visual impacts on the adjacent areas or areas that are outside of the immediate area. Therefore, the construction and operation of the Project will not result in changes to the accessibility or use of nearby parks, preserves, conservation areas or private land holdings associated with environmental conservation, education, and protection.

3.1 Air Quality

Air Quality Standards for Criteria Pollutants

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The CAA, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The CAA identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

EPA has established NAAQS for six of the most common air pollutants – carbon monoxide (CO), lead (Pb), ground-level ozone (O₃), particulate matter (PM), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) – known as "criteria" air pollutants (or simply "criteria pollutants"). PM includes particle size categories with aerodynamic diameter less than 10 micrometers or less (PM₁₀) and particles size categories with aerodynamic diameters 2.5 micrometers (PM_{2.5})

or less. The presence of these pollutants in ambient air is generally due to numerous diverse and widespread sources of emissions.

The current NAAQS are presented below:

Table 3.1-1: Current National Ambient Air Quality Standards

Pollutant		Primary/Secondary	Averaging Time	NAAQS	Form
CO	Primary		8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Pb	primary and secondary	Rolling 3-month average		0.15 $\mu\text{g}/\text{m}^3$	Not to be exceeded
NO ₂	Primary		1 hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	primary and secondary		1 year	53 ppb	Annual Mean
O ₃	primary and secondary		8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM	PM _{2.5}	Primary	1 year	12.0 $\mu\text{g}/\text{m}^3$	Annual mean, averaged over 3 years
		Secondary	1 year	15.0 $\mu\text{g}/\text{m}^3$	Annual mean, averaged over 3 years
		primary and secondary	24 hours	35 $\mu\text{g}/\text{m}^3$	98 th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	150 $\mu\text{g}/\text{m}^3$	Not to be exceeded more than once per year on average over 3 years
SO ₂	Primary		1 hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary		3 hours	0.5 ppm	Not to be exceeded more than once per year

Note: ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$, = micrograms per cubic meter

The Florida Department of Environmental Protection (DEP) has adopted and incorporated NAAQS in Florida Administrative Code (F.A.C.) Chapter 62-204.800.

EPA designates geographical areas as either meeting the air quality standards or not meeting the standards. If the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area (designated “unclassifiable/attainment”); areas that don't meet the national standard are called nonattainment areas. In some cases, EPA is not able to determine an area's status after evaluating the available information. Those areas are designated “unclassifiable”. The designation process depends on States and tribes submitting recommendations to the EPA as to whether or not an area is attaining the NAAQS for a criteria pollutant. The States and tribes base these recommendations on air quality data collected from monitors at locations in urban and rural settings, as well as other information characterizing air quality, such as modeling.

The CAA requires each State to develop a general plan to attain and maintain the standards in all portions of the State and a specific plan to attain the standards for each area designated as nonattainment. These plans, known as State Implementation Plans or SIPs, are developed by State and local air quality management agencies and submitted to EPA for approval. Currently, there are no non-attainment areas in Florida.

Areas that are in attainment of the NAAQS are categorized as either “Class I”, “Class II,” or “Class III” which determines the increment of air quality deterioration allowed. Class I allows very little deterioration of air quality; Class II allows moderate deterioration; and Class III allows more deterioration; but in all cases the pollution concentrations are not allowed to violate any of the NAAQS. Congress has established maximum allowable increases in air quality over baseline concentrations of certain pollutants for each class. These maximum allowable increases, or increments, cannot be exceeded by new or modified existing sources of those pollutants.

Under the federal Prevention of Significant Deterioration (PSD) program (40 CFR Part 51.166), all international parks, national wilderness areas and national memorial parks that exceed 5,000 acres, and of national parks that exceed 6,000 acres are designated as mandatory federal Class I areas in order to preserve, protect, and enhance air quality. All other areas that attain the NAAQS are initially designated as Class II.

There are 5 Class I areas within 300 km of the Project Site, which is typically the distance for evaluating impacts from project emissions on a Class I area:

- The Chassahowitzka National Wildlife Refuge (NWR), managed by the USFWS, located approximately 28 km northwest of the proposed power plant.
- The St. Marks NWR, managed by the USFWS, located approximately 234 km northwest of the proposed power plant.
- The Okefenokee NWR, managed by the USFWS, located approximately 245 km northeast of the proposed power plant.
- The Bradwell Bay Wilderness, managed by the USFWS, located approximately 274 km northwest of the proposed power plant.
- The Everglades National Park, managed by the National Park Service, located approximately 295 km southwest of the proposed power plant.

Under the CAA, the Federal Land Manager (FLM) and the Federal official with direct responsibility for management of Federal Class I parks and wilderness areas (i.e., Park Superintendent, Refuge Manager, Forest Supervisor) have an affirmative responsibility to protect the air quality related values (AQRVs) (including visibility) of such lands, and to consider whether a proposed major emitting facility will have an adverse impact on such values. The FLM's decision regarding whether there is an adverse impact is then conveyed to the permitting authority – usually a State

agency – for consideration in its determinations regarding the permit. The permitting authority’s determinations generally consider a wide range of factors, including the potential impact of the new source or major modification on the AQRVs of Class I areas, if applicable. Based on recent guidance, permitting authorities will consider a source located greater than 50 km from a Class I area to have negligible impacts with respect to Class I AQRVs if its total SO₂, NO_x, PM₁₀, and sulfuric acid mist (H₂SO₄) emissions (in tons per year, based on 24-hour maximum allowable emissions), divided by the distance (in km) from the Class I area is 10 or less. The permitting authorities would not request any further Class I AQRV impact analyses from such sources.

The FDEP primarily regulates air quality throughout the State and ensures that the ambient air quality in Florida is maintained in accordance with the levels established by the State and federal NAAQS and the PSD Rules. To carry out this responsibility, the Florida DEP operates and maintains a network of ambient air quality monitoring (AQM) sites throughout the State. Air quality monitoring is performed at the following sites that are close to the proposed power plant:

- Munro Street Near-Road (ID 12-057-0113) (48 km south)
- St. Petersburg College (ID 12-103-0004) (51 km southwest)
- Azalea Park (ID 12-103-0018) (69 km southwest)
- Sydney (ID 12-057-3002) (56 km southeast)
- Oakwood (ID 12-103-5003) (32 km southwest)
- Baptist Children’s Home (ID 12-105-6006) (70 km southeast)
- San Antonio (ID 12-101-0005) (25 km east)
- Sawgrass Lake Park Near-Road (ID 12-103-0027) (62 km southwest)
- Kenly (ID 12-057-0100) (49 km southeast)
- Crystal River Preserve (ID 12-017-0006) (64 km north)

Information about surrounding air quality of the project area characterizes the immediate environment. The monitors at Munro Street Near-Road, St. Petersburg College, Azalea Park, and Sydney would provide a status of air quality in the area surrounding the proposed Project.

Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). Carbon dioxide (CO₂) is the most common GHG and enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Other common GHGs are methane (CH₄) and nitrous oxide (N₂O). Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills and wastewater treatment systems. Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste. Fluorinated gases such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride are synthetic, powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons, hydrofluorocarbons, and

halons). These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases"). Equivalent CO₂ (or CO₂e) is the amount of CO₂ that would cause the same level of radiative forcing as a unit of one of the other GHGs. For example, 1 ton of CH₄ has a CO₂e of 25 tons; therefore, 25 tons of CO₂ would cause the same level of radiative forcing as 1 ton of CH₄. Nitrous oxide has a CO₂e value of 298.

New major sources with the potential to emit 100,000 TPY CO₂e or more of GHG are considered major sources, however GHG alone could not trigger PSD review. PSD for GHGs could only be triggered if other pollutants trigger the requirements. For PSD purposes, GHGs are a single air pollutant defined as the aggregate group of the following six gases: CO₂, N₂O, CH₄, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluorides (SF₆).

Once major sources become subject to PSD, these sources must meet the various PSD requirements in order to obtain a PSD permit. However, there are no ambient air quality standards or PSD increments for GHGs. Therefore, the requirements for a source impact analysis, air quality analysis (monitoring), and additional impact analyses are not required. PSD review for GHGs principally involves the control technology review that includes a determination of best available control technology (BACT). The EPA published the PSD and Title V permitting guidance for GHGs in March 2011 that provides guidance on BACT analyses for GHG emissions.

Based on EPA's 2021 GHG emissions inventory, the electric power sector contributes 25% of the national GHG emissions and 38% of Florida GHG emissions. The total annual GHG emissions from Florida rank third among the states and contribute 4.3% of the national total.

Hazardous Air Pollutants

Hazardous air pollutants (HAPs), which are also known as toxic air pollutants or air toxics, are those pollutants that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects. Under the CAA, EPA is required to regulate emissions of HAPs. EPA's list of HAPs includes 187 toxic air pollutants.

Most air toxics originate from human-made sources, including mobile sources (e.g., cars, trucks, buses) and stationary sources (e.g., factories, refineries, power plants), as well as indoor sources (e.g., building materials and activities such as cleaning). Major sources of HAPs are defined as sources that emit 10 TPY of any of the listed toxic air pollutants, or 25 TPY of a mixture of air toxics. Area sources of HAPs are defined as sources that emit less than 10 TPY of a single air toxic, or less than 25 TPY of a combination of air toxics.

HAPs are usually a localized problem near the emission source. Health effects of HAPs may occur at exceptionally low levels; for many HAPs exposure levels that may cause adverse health effects have not been identified. HAPs are regulated separately from criteria air pollutants. Unlike regulations for criteria pollutants, there are no ambient air quality standards for HAPs. The FDEP has authority to control HAP emissions under Chapter 62-204.800, F.A.C., which has adopted the National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61.

3.1.1 Affected Environment

To ensure that the ambient air quality in Florida is maintained in accordance with the levels established by the State and federal NAAQS and the PSD Rules, the FDEP operates and maintains a network of ambient AQM sites throughout the State. There are total of 90 monitoring stations monitoring CO, Pb, NO₂, SO₂, O₃, PM₁₀, and PM_{2.5} in the state. Based on the 2022 ambient monitoring report from the FDEP, four monitors have maximum concentrations that exceeded the NAAQS O₃ level and two monitors have maximum concentrations that exceeded

the NAAQS SO₂ level. The maximum recorded concentrations in FL are summarized in Table 3.1-2 below and compared to the standards:

Table 3.1-2: Maximum Recorded Pollutant Concentrations

Pollutants/ Averaging Times	Maximum 2022 Concentration	NAAQS
CO – 1 hour	1,800 ppb	35,000 ppb
CO – 8 hour	1,500 ppb	9,000 ppb
Pb – 3 months	0.12 µg/m ³	0.15 µg/m ³
NO ₂ – 1 hour	68 ppb	100 ppb
NO ₂ – Annual	13.39 ppb	53 ppb
O ₃ – 8 hour	80 ppb	70 ppb
PM ₁₀ – 24 hour	110 µg/m ³	150 µg/m ³
PM _{2.5} – 24 hour	30.6 µg/m ³	35 µg/m ³
PM _{2.5} – Annual	9.5 µg/m ³	12 µg/m ³
SO ₂ – 1 hour	115.2 ppb	75 ppb

Note that these values represent maximums from all monitors in the State. Although the maximum recorded concentration at a monitoring station may exceed the NAAQS level, the NAAQS may not in fact be violated because some standards – such as 1-hour average NO₂ and SO₂, 8-hour average O₃, and 24-hour average PM_{2.5} standards – are based on a 3-year average of 98th or 99th percentile daily maximum concentrations. The nearest monitor to the project is the San Antonio O₃ monitor, 25 km from the Project. The monitoring data from the Munro Street Near-Road, St. Petersburg College, Azalea Park, and Sydney sites provide a status of air quality in the area surrounding the proposed project and none of these monitors exceeded the NAAQS. The 2022 data for four air quality monitoring sites obtained from the EPA Air Data website are summarized in Table 3.1-3 below:

Table 3.1-3: Maximum Recorded Pollutant Concentrations

Pollutants/ Averaging Times	Munro Street Near-Road	St. Petersburg College	Azalea Park	Sydney	NAAQS
CO – 1 hour	1,210 ppb	N/A	N/A	1,070 ppb	35,000 ppb
CO – 8 hour	1,000 ppb	N/A	N/A	500 ppb	9,000 ppb
Pd – 3 months	N/A	N/A	N/A	0.014 µg/m ³ (24-hr Max)	0.15 µg/m ³
NO ₂ – 1 hour	44.7 ppb	N/A	N/A	17.1 ppb	100 ppb
NO ₂ – Annual	9.2 ppb	N/A	N/A	2.9 ppb	53 ppb

Table 3.1-3: Maximum Recorded Pollutant Concentrations

Pollutants/ Averaging Times	Munro Street Near-Road	St. Petersburg College	Azalea Park	Sydney	NAAQS
O ₃ – 8 hour	N/A	65 ppb	66 ppb	63 ppb	70 ppb
PM ₁₀ – 24 hour	N/A	N/A	66 µg/m ³	37 µg/m ³	150 µg/m ³
PM _{2.5} – 24 hour	18.7 µg/m ³	18.5 µg/m ³	20.1 µg/m ³	17.6 µg/m ³	35 µg/m ³
PM _{2.5} – Annual	8.0 µg/m ³	7.0 µg/m ³	7.6 µg/m ³	7.4 µg/m ³	12 µg/m ³
SO ₂ – 1 hour	N/A	N/A	N/A	14.6 ppb	75 ppb

3.1.2 Environmental Consequences

The Preferred Alternative

Air emissions will be generated during both construction and operation of the proposed Project.

Construction Emissions

The activities associated with the construction of the proposed Project will result in the generation of fugitive PM emissions and vehicle exhaust emissions. Fugitive PM including PM₁₀ and PM_{2.5} will result primarily from onsite vehicular travel over paved and unpaved roads. Construction traffic will include heavy equipment traffic and traffic due to construction workers entering and leaving the Site and the temporary construction parking and laydown area. Fugitive PM will also be generated from various earth-moving activities such as grading and filling, material handling activities such as truck loading and unloading of construction debris and soil, and wind-generated fugitive dust from exposed land areas. Total PM₁₀ emissions from site preparation are estimated to be 0.12 tons.

Emissions will also result from the combustion of diesel or natural gas fuel to power the construction equipment such as trucks, graders, and various nonroad engines. These emissions include CO, NO_x, VOC, PM₁₀, PM_{2.5}, SO₂, and GHGs. The nonroad engine exhaust emissions were estimated in the SCA application for the Project using available EPA emission factors for non-road diesel engines, fuel consumption rates, fuel sulfur content, and emissions factors from EPA's AP-42, compilation of air pollution emissions factors document. These emissions are also summarized in Table 3.1-4 and are estimated to be 0.32, 0.33, 0.04, 0.02, and <0.01 tons for CO, NO_x, VOC, PM₁₀, and SO₂, respectively.

Fugitive PM emissions may occur from wind erosion from open areas. The areas subject to wind erosion will generally be small due to the nature of construction activities and control measures. In the SCA application, fugitive PM₁₀ emissions from wind erosion have been estimated to be a total of 0.35 tons per year (TPY) during the construction period.

Fugitive PM emissions will also result from the movement of construction vehicles on the onsite paved road surfaces, which were estimated using methodologies specified in EPA's AP-42 document. Based on the average construction workforce, PM₁₀ emissions from paved road surfaces were estimated to be a total of 0.25 tons during the construction period.

Emissions will also result from the combustion of diesel and gasoline fuels in the engines associated with cranes, trucks, compressors, etc. The CO, NO, VOC, PM₁₀, and SO₂ emissions were estimated to be 3.62, 4.30, 0.41, 0.21, and 0.01 TPY, respectively, during the erection of the component parts of the combined cycle unit.

The auxiliary boiler associated with the proposed Project may be used during construction of the project for chemical cleaning and steam blow activities. As presented in the SCA application, the maximum emissions from the boiler for this purpose are: 3.6, 2.3, 0.2, 0.3, and 0.3 TPY for CO, NO_x, VOC, PM₁₀, and SO₂, respectively.

Table 3.1-4: Summary of Potential Construction Emissions for Project

Pollutant	Potential Construction Emission (TPY)					Total
	Site Preparation	Open Areas	Construction Worker On-site Traffic	Facilities Construction	Boiler	
PM ₁₀	0.14	0.35	0.25	0.21	0.3	1.25
NO _x	0.33	-	-	4.30	2.3	6.93
SO ₂	< 0.01	-	-	0.01	0.3	0.31
CO	0.32	-	-	3.62	3.6	7.54
VOC	0.04	-	-	0.41	0.2	0.65
GHGs (CO ₂ e)	-	66.4	-	-	986.4	5,268

Operation Emissions

Air emissions will be generated from the following emissions units during the operation of the proposed Project:

- One combustion turbine generator (CTG) and heat recovery steam generator with duct burner
- One diesel-fired nominal 1,500 kW emergency generator
- One diesel-fired nominal 347 hp emergency fire water pump
- One 60 MMBtu/hr natural gas-fired auxiliary boiler
- One 6-cell mechanical draft cooling tower
- Two circuit breakers

Estimated annual emissions from the proposed Project exceed the Prevention of Significant Deterioration (PSD) significant emission rate for one or more criteria pollutants, including SO₂, PM (total suspended particulate), PM₁₀, PM_{2.5}, CO, and sulfuric acid mist. As a result, this project is classified as a major stationary source and is subject to the general preconstruction review requirements outlined in Rule 62-212.300, F.A.C., as well as the specific preconstruction review requirements for major stationary sources outlined in Rule 62-212.400, F.A.C. A PSD air construction permit application was submitted to FDEP in September 2018 and the air construction permit has been authorized by FDEP. Based on the PSD air construction permit application, following is the summary of air emissions estimated to be emitted by the Project on an annual basis.

Table 3.1-5: Summary of Maximum Potential Annual Operational Emissions for Project in tons/yr

Pollutant	CT/HRSG	Emergency Generator	Auxiliary Boiler	Fir Pump Engine	Cooling Tower	Total
SO ₂	90.7	0.00580	0.34	0.00096	-	91.0
PM	59.3	0.181	0.42	0.029	8.03	68.0
PM ₁₀	59.3	0.181	0.42	0.029	1.59	61.5
PM _{2.5}	59.3	0.181	0.42	0.029	0.002	59.9
NO _x	116.8	5.80	3.00	0.57	-	126.2
CO	179.1	3.17	4.80	0.497	-	187.6
VOC	30.7	0.907	0.30	0.143	-	32.1
Total HAPs	7.0	0.00529	0.00583	0.0010	-	7.0
Single HAP	3.5	0.00441	2.92E-04	4.86E-05	-	3.5
Greenhouse Gases (CO ₂ e)	1,912,234	606	7,019	100.8	-	1,920,022

As shown in Table 3.1-5, the Project's potential to emit HAP emissions is 7 tons/yr for total HAPs and 3.5 TPY for any single HAP, which are below the major HAPs source thresholds of 25 tons/yr for combined HAPs and 10 TPY for any single HAP. The proposed Project is therefore considered to be a minor or area source of HAPs emissions.

As part of the PSD review, the Project required a BACT evaluation for pollutants that triggered PSD review. BACT represents an emission limitation that ensures the highest achievable reduction in emissions, taking into account the project's specific economic, environmental, and energy impacts, as well as the feasibility of employing various technologies (as stated in Rule 62-212.400, F.A.C.). The air construction permit No. 1010524-004-AC/PSD-FL-444A requires installation of the following control systems and work practice standards to achieve the emissions standards established as BACT:

- Dry-low NO_x combustors and selective catalytic reduction for NO_x emissions from the CTG
- Combustion design and good operating practices for CO and VOC emissions from the CTG
- Use of natural gas fuel for PM/PM₁₀/PM_{2.5} and SO₂ emissions from the CTG
- For the auxiliary boiler, use of low-NO_x burners for NO_x emissions, good combustion practices for CO and VOC emissions, and use of natural gas fuel for SO₂ emissions
- Use of good combustion practices and ultra low-sulfur diesel fuel for emissions from the emergency generator and fire pump
- Use of high efficiency drift eliminator for the cooling tower

A BACT review was also performed for the GHG emissions from the proposed Project and energy efficiency was determined to be the BACT. A GHG BACT limit of 875 pounds of CO₂e per megawatt hour of power generation (lb CO₂e/MWh) is required by the air construction permit.

Potential Air Quality Impacts

The construction phase air emissions will be temporary and will occur only during the construction period. Due to the much smaller quantity of air emissions compared to the annual operation phase air emissions and the temporary period of emissions, the construction phase air emissions are expected have negligible impact on ambient air quality standards. The majority of the construction phase air emissions will be fugitive PM generated from construction activities, which are typically not regulated.

As part of the PSD review, the proposed Project also required an air quality impact analysis to demonstrate that the Project will not cause or contribute to violations of the NAAQS and allowable PSD Class II increments. Based on the air dispersion modeling results presented in the air construction permit application, the Project's maximum ambient air quality impacts were predicted to be below the significant impact levels established by EPA, which means that the Project's emission are considered to be insignificant in terms of the potential to cause or contribute to violations of the NAAQS and allowable PSD increments. Since the Project's air quality impacts were determined to be below the significant impact levels, a cumulative air quality analysis was not required for the permitting process. There are no ambient air quality standards for GHGs and therefore, an air quality impact analysis was not performed for GHGs. The FDEP does not have an air toxics policy and the Project air construction permit application did not require air quality impact analysis to determine potential ambient air impacts for hazardous or toxic air pollutants. However, as noted above, the Project is considered a minor source or area source of HAP emissions.

GHG Emissions and Climate Change

During the construction phase, GHG emissions would be generated from the combustion of fuel in various construction equipment engines and engines of automobiles used in transporting personnel and material to and from the construction sites. As shown in Table 3.1-4 above, the total GHG emissions during the construction phase was estimated to be only 6,321 tons of CO₂e, which is negligible compared to the annual operation phase emissions. As shown in Table 3.1-5 above, it was estimated that the proposed Project will emit 1.9 million tons of CO₂e per year during operations.

Based on USEPA's Facility Level Information on GHG Tool for 2021 GHG emissions inventory the Project GHG emissions can be compared to the local and regional GHG emissions levels. Based on the inventory, the direct GHG emissions from the Project will represent:

- Approximately 2% of the total GHG emissions from all reporting industrial facilities in FL
- Approximately 0.8% of the total GHG emissions from all reporting industrial facilities in FL, AL, and GA combined

Based on the US 2020 GHG Emissions Inventory, the following are the GHG emissions in FL by economic sectors:

- Electric power industry – 38.1%
- Transportation sector – 36.8%
- Industry sector – 11.1%
- Commercial sector – 8%
- Residential sector – 2.1%
- Agricultural sector – 3.9%

Based on the economic sector breakdown, the direct GHG emissions from the proposed Project are estimated to be 0.7% of total GHG emissions in FL and 0.3% of total GHG emissions in FL, AL, and GA combined.

The proposed Project is a natural gas-fired combined cycle power plant which will generate a nominal 573-MW of electricity. The electricity is needed to meet Florida's growing power demand and also to phase away from coal-fired power generation. Florida is the second largest producer of electricity after Texas and based on Energy Information Administration (EIA) data, 74% of Florida's total electricity was generated from natural gas in 2021 compared to 5% from coal. Based on EPA's eGRID data coal units have an average emission rate of 2,180 lb of CO₂ per MWh as compared to the GHG emission rate of 875 lb/MWh from the Project. Once the Project is completed, Seminole will have constructed three new natural gas fired power plants with a total generation potential of 1,623 MWh as part of its long-term plan to serve the system load needs of its members, while also shutting down one currently operating coal-fired unit (Seminole Palatka) with a capacity of 638 MWh. Assuming 35% (573 MW/1,623 MW) of the existing 638 MWh coal generation would be replaced by the proposed Project, the potential to reduce GHG emissions from coal-fired energy production is approximately 1.2 million metric tons of CO₂e annually, which would significantly offset the emissions expected from the SHCCF.

As directed by Executive Order No. 13990 (86 FR 7037, January 25, 2021), the Interagency Working Group on Social Cost of GHGs issued an interim technical guidance (Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates under Executive Order 13990) in February 2021 to estimate the monetary value of changes in GHG emissions resulting from a project. The Guidance provides social cost of carbon, social cost of methane, and social cost of nitrous oxide, collectively social cost of GHGs in dollar per ton of emissions (2020 dollars) for the years 2020-2050 in five-year increments. The cost factors are presented for three different discount rates – 2.5 percent, 3 percent, and 5 percent. Discount rates are a measure of the value of money over time. Higher discount rates result in a lower social cost of carbon, which means that if future climate damages are discounted at a higher rate, it is less costly to avoid those damages today. The 3 percent discount rate was chosen according to the Institute of Policy Integrity (July 2017), which recommends the 3 percent discount rate as the central or middle estimate, which is based on an average, rather than worst-case climate change outcome.

The social cost of carbon (SCC) estimate for GHG emissions associated with the operation of the proposed Project are presented below in Table 3.1-6. The costs were estimated using 3 percent discount rate for the period starting 2025 up to 2050 in five-year increments.

Table 3.1-6: Social Cost of Carbon for Operation Phase Greenhouse Gas Emissions (2020 dollars)

	SCC – CO ₂	SCC – CH ₄	SCC – N ₂ O	SCC – GHG
Year – 2025	97,440,340	54,874	67,802	97,563,015
Year – 2030	107,880,376	64,557	74,259	108,019,193
Year – 2035	116,580,407	71,013	80,716	116,732,136
Year – 2040	127,020,443	80,697	90,402	127,191,542
Year – 2045	137,460,480	90,380	96,859	137,647,719
Year – 2050	147,900,516	100,064	106,545	148,107,125

As shown in Table 3.1-6, the social cost of GHG emissions associated with the operation of the proposed Project ranges from \$97.6 million in 2025 to over \$148 million in 2050. These costs are however expected to be offset by

the cost savings achieved by the replacement of coal-fired electricity generation by natural gas-fired electricity generation by the proposed Project. As discussed above, a potential decrease of 1.2 million metric tons of CO₂ could be achieved, which would offset more than 60% of the estimated SCC from the proposed Project.

The GHG emissions upstream of the proposed Project were also evaluated. Since the Project will be using natural gas to generate electricity, GHG emissions associated with the exploration, production, and delivery of the natural gas that will be consumed by the Project are considered to be the upstream GHG emissions as defined by EPA. The latest US GHG Emissions Inventory was researched to obtain the GHG emissions for the most recent year of available data for the following source categories –

- Natural gas – production
- Natural gas – transmission and storage
- Natural gas – distribution
- Natural gas – processing
- Natural gas - exploration

The available GHG emissions data for these source categories were added and divided by the US national natural gas production data obtained from the US Energy Information Administration (EIA) to obtain an emission factor in metric tons (MT) of CO₂e per million cubic feet of NG. This emission factor was used to estimate the upstream GHG emissions for the Project as following:

- Total 2021 GHG emissions for NG sectors identified above – 204.6 million MT CO₂e
- Total 2021 US NG production – 41,666,118 million ft³
- Emission factor – 4.91 MT CO₂e/million ft³
- Project NG demand – 32,731.9 million ft³/yr
- Upstream GHG emissions = 160,714 MT CO₂e

The SCC of the upstream GHG emissions were estimated to be \$9 million in 2025 to \$13.7 million in 2050. The total SCC for the proposed Project is therefore, \$106.6 million in 2025 to approximately \$162 million in 2050. The upstream costs will be offset by the SCC associated with the production of the coal required for the coal generation that will be replaced by the proposed Project. Assuming 35% (573 MW/1,623 MW) of the existing 638 MWh coal generation that could be replaced by the proposed Project, the SCC of the replaced coal upstream (source categories underground mining and surface mining) can be estimated to be \$4.2 million in 2025 to \$6.3 million in 2050, which will offset the SCC for upstream NG. Note that the product of the proposed Project is electricity and the GHG emissions downstream of the Project are not reasonably foreseeable. It is understood that there are no GHG emissions associated with transmission of electricity to the end users and emissions associated with the various uses of electricity are direct emissions attributable to the end user.

Climate change is a global issue and is affecting the global climate in the form of sea level rise and change in weather patterns, which is affecting regional temperature variations, precipitation amounts, plants and vegetation, wildlife migration, and human livelihoods. The increase in GHG emissions in the atmosphere over the industrial era is the result of human activities and that human influence is the principal driver of many changes observed across

the atmosphere, ocean, cryosphere, and biosphere. As part of its commitment to implement the Paris Agreement under the United Nation's Framework Convention on Climate Change, the United States submitted a Nationally Determined Contribution (NDC) on April 21, 2021 pledging to reduce economy-wide net GHG pollution by 50 to 52 percent from 2005 levels by 2030. The National Climate Advisor developed the NDC in consultation with the Special Presidential Envoy for Climate, and it was approved by President Biden. The NDC is based on an analysis of the electricity, transportation, buildings, industry, and land sectors of the economy.

The proposed Project will use natural gas to produce electricity, which is considered to be the cleanest fossil fuel. More than 70% of electricity in Florida is generated from natural gas. As discussed above, a small amount (5%) of electricity is currently generated from coal combustion and the proposed Project will facilitate further reduction on power generation from coal combustion, which generates more GHG per megawatt basis compared to natural gas. The proposed Project is therefore expected to contribute to lowering the intensity of GHG emissions from electric power generation in Florida, allowing Seminole to increase its power generation to meet the needs of its members and their customers while minimizing associated GHG emissions.

In order to help achieve the target GHG emissions reduction by 2030, the electric power industry is in the process of identifying and testing various alternative clean fuel sources. Hydrogen has been identified as a potential zero-carbon fuel that can help lower GHG emissions. Hydrogen, however, is not readily available and needs to be either produced onsite or shipped from offsite with onsite storage. The onsite production would require a heating source, which may generate additional GHG emissions if fossil fuel is combusted in the heating source. Burning natural gas blended with hydrogen is still in the experimental stage and only one air permit has so far been issued in Florida that authorized hydrogen blending up to 5%. If green hydrogen can be produced onsite, 5% blending can reduce GHG emissions from the Project by approximately 88,000 metric tons. As additional data becomes available on the option to blend natural gas with hydrogen or the use of other zero or low-carbon fuels, these options will be considered for the Project in the future.

As part of the PSD air permit application, a BACT review was performed for GHG emissions from the Project and the feasibility of a carbon capture and storage (CCS) system was analyzed and it was concluded that CCS is not applicable to the Project. The application of CCS is very much in the development stage and not commercially available for full-scale power plants like the proposed Project.

No Build Alternative

Under a "no build" scenario, no emissions from the site associated with power generation would be expected to occur.

3.1.3 Mitigation Measures

The final air construction permit – (Permit Number 1010524-001-AC / Facility ID # 1010524), was originally issued on July 27, 2018 and reissued on February 15, 2023, and is available on the following website: <https://fldep.dep.state.fl.us/air/emission/apds/default.asp>.

As part of the PSD air construction permit application, a BACT analysis was performed for the Project, which represents an emission limitation that ensures the highest achievable reduction in emissions, taking into account the project's specific economic, environmental, and energy impacts as well as the feasibility of employing various technologies. Air construction permit No. 1010524-004-AC/PSD-FL-444A requires installation of the following control systems and work practice standards to achieve the emissions standards established as BACT:

- Dry-low NO_x combustors and selective catalytic reduction for NO_x emissions from the CTG

- Combustion design and good operating practices for CO and VOC emissions from the CTG
- Use of natural gas fuel for PM/PM₁₀/PM_{2.5} and SO₂ emissions from the CTG
- For the auxiliary boiler, use of low-NO_x burners for NO_x emissions, good combustion practices for CO and VOC emissions, and use of natural gas fuel for SO₂ emissions
- Use of good combustion practices and ultra low-sulfur diesel fuel for emissions from the emergency generator and fire pump
- Use of high efficiency drift eliminator for the cooling tower

For GHGs, energy efficiency was determined to be the BACT. In fact, the Project is limited to 875 lb of CO₂e per MW-hr of electricity output, which is considered to be one of the lowest for natural gas-fired combined cycle power plants.

Reasonable precautions pursuant to FDEP Rule 62-296.320(4)(c)3, F.A.C., will be used to minimize fugitive particulate emissions during the construction phase of the project. These precautions include use of high moisture content material, watering and use of chemical dust suppressants on unpaved surfaces, and watering/sweeping of paved road surfaces as necessary. Non-road engines with EPA Tier 3 emissions certification will be used to minimize combustion-generated pollutant emissions. For the auxiliary boiler, good combustion practices will be used to minimize emissions generated during the construction period.

See Section 3.1.2 for a discussion of the extent to which the retirement of a coal-fired unit at the Seminole Generating Station will offset emissions from the SHCCF.

3.2 Land Use

The following subsections present a summary of the comprehensive plan and zoning requirements for Pasco County.

Pasco County Comprehensive Planning and Land Development Regulations

The state of Florida has developed an integrated planning system to ensure the coordinated administration of policies that address issues posed by the state's continued growth and development. Growth management legislation was initially passed in 1985 in response to Florida's commitment to provide the facilities and services that communities needed to foster economic growth and preserve natural amenities. Through the Florida Statutes (F.S.), key guidance is identified for these planning activities. These plans are like a vision or long-range plan for the local governments. The Code of Ordinances (and Land Development Regulations, which are either a part of or a supplement to the Code) provides the regulations and requirements, in accordance with the Comprehensive Plan, for the prevailing uses, the growth characteristics, and the character of the respective jurisdiction, and the suitability for land uses that encourages the most appropriate use of the land throughout a jurisdiction.

Pasco County Comprehensive Plan

The original Pasco County Comprehensive Plan was adopted June 15, 1989 (#89-13). In accordance with state law (Chapter 73C-49, F.A.C.), at least every seven years local governments are required to review their plans to determine if revisions are necessary to reflect applicable changes. In addition, as a county's vision changes and as the county grows, so too will the plan grow through a series of amendments. Pasco County's 2025

Comprehensive Plan was last updated and posted online on February 6, 2023, through Ordinance No. 23-01, adopted January 10, 2023.

3.2.1 Affected Environment

According to the Pasco County Future Land Use Map adopted by the Pasco County Board of County Commissioners by Ordinance 18-24, the Site is located within a Major Public/Semi-Public future land use designation (P/SP). The area surrounding the Site is within Major Public/Semi-Public and Industrial Heavy future land use designations (See Figure 6). Per Future Land Use Element (Chapter Two) "Section FLU A-6 of the Comprehensive Plan, the intent of P/SP is to recognize "major existing and programmed public/semipublic facilities, primarily those facilities associated with public or private utilities..." The Pasco County Planning and Development staff recommended the P/SP future land use designation for the Site and adjacent areas which was approved by the referenced Ordinance.

SHCCF is located outside of sensitive lands and areas of special concern, such as rivers, lakes, wetlands, floodplains, natural vegetation communities, wells, wellfields, and 5 and 10-year protection areas, coastal high hazard areas, and evacuation routes.

The Site is encircled by industrial and utility-type existing land uses, with which the SHCCF Project will be compatible. Specifically, to the north is the Pasco County Solid Waste Resource Recovery Facility. To the east is Seminole's Back-Up Control Center and beyond that, there is a Withlacoochee Electric Cooperative, Inc. substation. To the south is a warehouse (managed asset recovery services center) that is currently inactive and other properties within North Suncoast Industrial Park. To the west are the existing SHGS, SHWWTF, DEF's 230 and 500 kV transmission lines and Hudson Substation, and FGT's natural gas transmission line.

Importantly, FLU Policy 1.4.6 entitled "Utility Compatibility" only prohibits electric transmission corridors, natural gas pipeline easements, and similar facilities from being located "through or immediately adjacent to" existing neighborhoods. It does not prohibit utility uses such as the SHCCF from being located within properties bearing a Residential land use classification nor does it label the same as being inconsistent therewith. Rather, the fact that the surrounding uses are industrial in nature and not existing neighborhoods conforms with the requirements of FLU Policy 1.4.6 and demonstrates consistency with the County's FLU policies.

Future Land Use Element, Policy FLU 1.10.1 identifies the County's intent to review proposed uses for their compatibility and appropriate timing pertaining to the intended use and location. This review is typically conducted through the special exception zoning application process and considers the existing uses and the potential changes to the existing densities and intensities, the changes to development patterns in the area, the anticipated transitions between land uses, the potential changes to environmental, cultural features, and community character, and the timing of available public facilities/services associated with change in uses. Similar to the SHCCF Project, the existing surrounding uses have each been reviewed under similar processes and have demonstrated compliance with the intent of these provisions. The Special Exception Order for the SHCCF was issued on January 10, 2018. The approval includes Finding of Fact 3j, which reads in part "...[t]he proposed request is consistent with the LDC, Chapter 400, Permit Types and Applications; Section 402.4.E, Special Exception, Review Considerations; and the applicable provisions of the County's Comprehensive Plan", and Finding of Fact 5, which reads "[t]he special exception requested is consistent with the adopted Pasco County Comprehensive Plan and would not have an adverse effect on the health, safety, and welfare of the public."

Zoning

The Pasco County Land Development Code (LDC) consists of certain regulatory and administrative ordinances of the County. It establishes the regulations, procedures, and standards for review and approval of all proposed development within unincorporated areas of the County; implements a development review; effectively addresses the natural resource and public facility implications of each development, which is fair in terms of consistency with applicable regulations and procedures; preserves individual property rights, and interests of each citizen of the County, and serves as an implementation of the Comprehensive Plan. The LDC was last updated and posted online, March 8, 2023, and was codified through Ordinance No. 22-63 adopted December 6, 2022.

The County's Zoning regulations and map are a component of the County's LDC. The zoning map identifies the Site as within the Agricultural (A-C) zoning district (See Figure 7). Public and private utility facilities are an allowed use within this district as a special exception use when the use is in conformance with standards established by the County, State and Federal government. Specifically, Section 504.5 of the Pasco County Land Development Code permits "public and private utilities" as a special exception use in the A-C zoning district. In addition, A-C zoning uses are permitted within the Residential land use classification, provided they prove consistency with applicable provisions of the Comprehensive Plan's Goals, Objectives and Policies, and the A-C zoning designation.

3.2.2 Environmental Consequence

The Preferred Alternative

An application for Special Exception Use for the SHCCF was submitted to Pasco County on November 14, 2017 and was approved by the Planning Commission on January 10, 2018.

The Pasco County Order approving the Special Exception Use includes a determination that the proposed use is consistent with the Goals, Objectives, and Policies of the adopted Comprehensive Plan elements or applicable portions thereof. The Special Exception Order includes Finding of Fact 3j, which reads in part "...[t]he proposed request is consistent with the LDC, Chapter 400, Permit Types and Applications; Section 402.4.E, Special Exception, Review Considerations; and the applicable provisions of the County's Comprehensive Plan", and Finding of Fact 5, which reads "[t]he special exception requested is consistent with the adopted Pasco County Comprehensive Plan and would not have an adverse effect on the health, safety, and welfare of the public." A copy of the Order is contained in Appendix D –Pasco County's Determination of Land Use and Zoning Consistency, July 31, 2018.

No Build Alternative

Under a "no build" scenario, the site would remain vacant despite Pasco County's approval of a Special Exception authorizing use of the site for power generation. Given the nature of surrounding land uses, other utility-type uses of the site might be proposed in the future.

3.2.3 Mitigation Measures

The temporary construction parking and laydown area will include temporary roadways, material and equipment laydown, parking and office trailers and sanitary facilities. Installation of these facilities may require the removal of unsuitable soils, with clean fill added, and the surface area will be stabilized with rock, limestone, and shell, which will minimize erosion. Other areas within the construction laydown area will be seeded or sodded with grass to prevent erosion.

A Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented to minimize erosion and sedimentation during storm events. Best management practices (BMPs) will be developed and implemented to

minimize spills on-site. Maintenance and refueling activities will be performed only in designated areas. Any spills will be cleaned up and wastes will be disposed of in accordance with applicable requirements.

3.3 Biological Resources

Existing vegetation types on the 14-acre SHCCF Site consist of planted pines and native and nonnative invasive ground cover species. A small, wooded strip consisting of common woody species is located on the southern edge of the property. An area dominated by improved pastures, live oaks, and planted pines to be used for temporary construction parking and laydown is located to the east of the Site. The Site and temporary construction parking and laydown area are surrounded by a mixture of industrial land uses, historically disturbed and altered vegetative communities, and areas of forested uplands.

3.3.1 Affected Environment Vegetative Communities

Characteristic vegetative communities/land uses of the Site were classified utilizing the Florida Land Use, Cover and Forms Classification System (FLUCFCS). Level III (FDOT, 1999) data from the SWFWMD were updated based on field reconnaissance efforts conducted in August and October 2017. Vegetative communities, wildlife utilization, and potential for threatened and endangered wildlife occurrence were addressed during field reconnaissance conducted in October 2017 and supplemented on January 17th and April 10th, 2023, with the field reconnaissance of the construction and laydown area. Vegetative communities within and adjacent to the SHCCF Site and temporary parking and construction laydown area are discussed in detail below.

Vegetative Communities of the SHCCF Project Area

Vacant Land (FLUCFCS 190) – Approximately 8 acres of the SHCCF Site are classified as vacant land (Figure 8). This area was previously cleared and utilized as a temporary laydown and equipment storage area associated with the construction of the existing SHGS. Vegetation present in this area is dominated by ruderal native and non-native invasive/exotic groundcover species such as bahia grass (*Paspalum notatum*), beggar ticks (*Bidens* sp.), cogon grass (*Imperata cylindrica*), Durban crowfoot grass (*Dactyloctenium aegyptium*), and annual phlox (*Phlox drummondii*). A small, wooded strip exists on the extreme southern periphery of this area and includes common species such as live oak (*Quercus virginiana*), southern red cedar (*Juniperus silicicola*), and grapevine (*Vitis rotundifolia*).

Coniferous Plantation (FLUCFCS 441) – Approximately 1 acre within the northern portion of the SHCCF Site consists of pine plantation (Figure 8). The canopy is dominated by planted slash pine, with a variety of subdominant native and non-native invasive/exotic species such as planted southern red cedar, laurel oak, beautyberry (*Callicarpa americana*), caesarweed (*Urena lobata*), slender flattop goldenrod (*Euthamia caroliniana*), dogfennel (*Eupatorium capillifolium*), prickly pear cactus (*Opuntia humifusa*), Virginia creeper (*Parthenocissus quinquefolia*), cogon grass, bahia grass, beggar ticks, and grapevine.

Utilities (FLUCFCS 830) – Approximately 4 acres within the western portion of the SHCCF Site is designated as utilities and is dominated by ruderal native and non-native invasive/exotic herbaceous groundcover species such as bahia grass and beggar ticks (See Figure 8).

Vegetative Communities of the SHCCF Temporary Construction Parking and Laydown Area

Herbaceous (Dry Prairie) (FLUCFCS 310) – Open grass areas comprise approximately 7.16 acres within the laydown area. Typical vegetation in these areas consists of grasses such as bahia grass (*Paspalum notatum*) and

common carpet grass (*Axonopus fissifolius*) as well as dog fennel (*Eupatorium capillifolium*). During the site visit in January, this area had recently been mowed (See Figure 8).

Live Oak (FLUCFCS 427) – Live oak areas comprise approximately 5.81 acres within the laydown area and are dominated by a canopy of live oak (*Quercus virginiana*) and laurel oak (*Quercus laurifolia*). The understory is mainly cleared but shrub and groundcover species including beautyberry (*Callicarpa americana*), blackberry (*Rubus cuneifolius*), red cedar saplings (*Juniperus virginiana*), saw palmetto (*Serenoa repens*) and green briar (*Smilax sp.*) are present (See Figure 8).

Coniferous Plantation (FLUCFCS 441) – Coniferous pine plantation comprises 12.49 acres of the laydown area and consists primarily of a canopy of planted slash pine, with shrub and groundcover species including camphor tree (*Cinnamomum camphora*), oak saplings, wax myrtle (*Morella cerifera*), blackberry, dogfennel, and beautyberry (See Figure 8).

Vegetative Communities Adjacent to the SHCCF Site and Temporary Construction Parking and Laydown Area

The area surrounding the Site is dominated by existing industrial uses, although parcels of pine plantation and xeric upland forest occur adjacent to the north and east of the SHCCF Site. The surrounding vicinity is dominated by a variety of urban and suburban environments comprised of industrial, utility, and commercial uses. Residential land uses are limited to areas west of Pasco County’s Shady Hills Wastewater Treatment Plant. The temporary parking and construction laydown area is dominated by existing agricultural uses and native upland and wetland habitats. Parcels of xeric upland forest and open fields exist to the north and south of this area, respectively.

Terrestrial Ecology Systems

Terrestrial ecological resources were evaluated through field reconnaissance, habitat classification, database queries, aerial photography, and literature searches. Terrestrial ecological resources within and adjacent to the SHCCF Site and temporary parking and construction laydown area are discussed in detail below.

Terrestrial Ecology Systems – Fauna

The disturbed nature of the SHCCF Site area and temporary parking and construction laydown area provides poor quality wildlife habitat utilized by avian species and herpetofauna common to disturbed upland fields, cattle pasture, xeric upland forests, and coniferous plantations in central Florida.

A summary of non-listed terrestrial wildlife observed or likely to occur within the Site and temporary construction parking and laydown area is provided in Table 3.3-1, including avian species and herpetofauna. Non-listed terrestrial wildlife directly observed, indirectly observed (via tracks, scat, dens, and/or burrows), or likely to occur are discussed below based on primary habitat types within the Site and temporary construction parking and laydown area. Species classified as threatened, endangered, or species of special concern (listed species) are discussed in Section 3.3.4.

Table 3.3-1: Non-listed Wildlife Species Observed or Likely to Occur Within the SHCCF Site and Associated Temporary Laydown Area

Common Name	Scientific Name	Habitat Observed
Black-and-white warbler	<i>Mniotilta varia</i>	Coniferous plantation (FLUCFCS 441)
Black racer	<i>Coluber constrictor</i>	Coniferous plantation (FLUCFCS 441)

Common Name	Scientific Name	Habitat Observed
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	Coniferous plantation (FLUCFCS 441)
Blue jay	<i>Cyanocitta cristata</i>	Coniferous plantation (FLUCFCS 441)
Brown anole	<i>Anolis sagrei</i>	Coniferous plantation (FLUCFCS 441)
Carolina chickadee	<i>Poecile carolinensis</i>	Coniferous plantation (FLUCFCS 441)
Carolina wren	<i>Thryothorus ludovicianus</i>	Coniferous plantation (FLUCFCS 441)
Downy woodpecker	<i>Picoides pubescens</i>	Coniferous plantation (FLUCFCS 441)
Nine-banded armadillo		Coniferous plantation (FLUCFCS 441) and Vacant Land (FLUCFCS 190)
Northern cardinal	<i>Cardinalis cardinalis</i>	Coniferous plantation (FLUCFCS 441)
Northern mockingbird	<i>Mimus polyglottos</i>	Coniferous plantation (FLUCFCS 441)
Northern parula	<i>Setophaga americana</i>	Coniferous plantation (FLUCFCS 441)
Pine warbler	<i>Setophaga pinus</i>	Coniferous plantation (FLUCFCS 441)
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	Coniferous plantation (FLUCFCS 441)
Tufted titmouse	<i>Baeolophus bicolor</i>	Coniferous plantation (FLUCFCS 441)
Yellow-throated warbler	<i>Setophaga dominica</i>	Coniferous plantation (FLUCFCS 441)

Note: Habitat classification based on Florida Land Use, Cover, and Forms Classification System (Florida Department of Transportation, 1999).

Vacant Land, Improved Pasture, Live Oak, Coniferous Plantation, and Utilities (FLUCFCS 190, 211, 427, 441, and 830) – Although these upland habitats have been historically altered and do not provide quality native wildlife habitat, they are occasionally used by common resident and migratory non-listed avian species such as blue jay (*Cyanocitta cristata*), northern cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottos*), Carolina wren (*Thryothorus ludovicianus*), Carolina chickadee (*Poecile carolinensis*), tufted titmouse (*Baeolophus bicolor*), blue-gray gnatcatcher (*Polioptila caerulea*), pine warbler (*Setophaga pinus*), northern parula (*Setophaga americana*), black-and-white warbler (*Mniotilta varia*), yellow-throated warbler (*Setophaga dominica*), red-bellied woodpecker (*Melanerpes carolinus*), and downy woodpecker (*Picoides pubescens*), as well as common mammals and herpetofauna such as nine-banded armadillo (*Dasyus novemcinctus*), black racer (*Coluber constrictor*), and brown anole (*Anolis sagrei*).

Aquatic Ecology Systems

No wetlands or aquatic systems exist within the SHCCF Site or the temporary parking and construction laydown area. Therefore, no aquatic or wetland dependent fauna were observed within these areas.

Threatened and Endangered Species

Listed plant species are those plants that are listed by the U.S. Fish and Wildlife Service (USFWS) or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened, of special concern, or commercially exploited. Listed animal species are those animals classified as endangered, threatened, or of special concern, federally by the USFWS or within the State of Florida by the Florida Fish and Wildlife Conservation Commission (FWC).

Only one state-listed faunal species was observed during the field reconnaissance efforts, i.e., the gopher tortoise (*Gopherus polyphemus*). This species is common to the area and uses other upland habitats that are found throughout the surrounding region. No state or federal listed plant species were observed during the field reconnaissance efforts which occurred in August and October 2017, and January and April 2023.

USFWS previously evaluated the potential for the Project to impact federally-listed species. At the time of the PPSA siting process in 2018, USFWS reviewed an evaluation prepared on behalf of SHEC that included a field and desktop habitat, listed species survey, and database review to evaluate the potential for the occurrence of listed species in the Project area (including the SHCCF site, tie-line corridor and laydown area). The Service concluded that the Project is not expected to result in take of listed species. See Appendix B-4. In May 2023, USFWS reviewed an updated report addressing the slightly expanded laydown area and concluded that the laydown area does not currently have any listed species and that USFWS has no objection to the development of the parcel. Subsequently, in July 2023, USFWS reviewed the records for the SHCCF site, tie-line corridor and laydown area and again concluded that “the project is not likely to adversely affect federally listed species in accordance with Section 7 of the ESA (See Appendix B-4).

Plant and Animal Surveys

Field reconnaissance efforts were combined with the evaluation of habitat conditions to determine the presence or absence of threatened and endangered species within the SHCCF Site and temporary parking and construction laydown area.

Prior to field reconnaissance, county-specific lists of threatened and endangered species were obtained from the Florida Natural Areas Inventory (FNAI, 2017). In addition, geographic information system (GIS) data were obtained from the FNAI, which maintains a database of known occurrences of listed species throughout the State of Florida.

The FNAI database was queried, and documented locations of listed species within the Project Site and laydown area and vicinity were identified. Listed and non-listed wildlife species observed during field reconnaissance were recorded. The field effort was supplemented by evaluation of habitat conditions suitable for listed species to help identify additional species that were not observed but are likely to occur.

The potential for utilization of the Site and temporary parking and construction laydown area by most terrestrial listed species for foraging, roosting, or breeding is limited due to the significant alteration of the upland habitats present, as well as the surrounding industrial, utility, commercial, and (limited) residential development. Table 3.3-2 identifies occurrences of threatened and endangered species known to occur in Pasco County based on a review of the FNAI database. Federal and state-listed species that were observed or are likely to occur within the area based on information on available habitats within the Site, temporary construction parking and laydown area, and surrounding areas are discussed below.

Table 3.3-2: Pasco County Listed Species, Regulatory Status, and Probability of Occurrence with the Laydown Area

Common Name	Scientific Name	Federal Status	State Status	Probability of Occurrence
BIRDS				
Florida burrowing owl	<i>Athene cunicularia floridana</i>	N	T	None
Southeastern American kestrel	<i>Falco sparverius Paulus</i>	N	T	Moderate

Table 3.3-2: Pasco County Listed Species, Regulatory Status, and Probability of Occurrence with the Laydown Area

Common Name	Scientific Name	Federal Status	State Status	Probability of Occurrence
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA	N	Low
Florida sandhill crane	<i>Antigone canadensis pratensis</i>	N	T	Low
Little blue heron	<i>Egretta caerulea</i>	N	T	None
Wood stork	<i>Mycteria americana</i>	T	T	None
Scott's Seaside Sparrow	<i>Ammospiza maritima peninsulae</i>	N	T	None
Florida Scrub-Jay	<i>Aphelocoma coerulescens</i>	T	T	None
Piping Plover	<i>Charadrius melodus</i>	T	T	None
Marian's Marsh Wren	<i>Cistothorus palustris marianae</i>	N	T	None
Tricolored Heron	<i>Egretta tricolor</i>	N	T	None
American Oystercatcher	<i>Haematopus palliatus</i>	N	T	None
Black Rail	<i>Laterallus jamaicensis</i>	T	T	None
Least Tern	<i>Sternula antillarum</i>	N	T	None
REPTILES AND AMPHIBIANS				
Gopher tortoise	<i>Gopherus polyphemus</i>	C	T	Observed
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	T	Low
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	N	T	Low
Short-tailed snake	<i>Lampropeltis extenuate</i>	N	T	Low
PLANTS				
Giant orchid	<i>Pteroglossaspis ecristata</i>	N	T	None
Pinewoods dainties	<i>Phyllanthus liebmannianus ssp. Platylepis</i>	N	E	None
Auricled Spleenwort	<i>Asplenium erosum</i>	N	E	None
hammock fern	<i>Blechnum occidentale var. minor</i>	N	E	None
many-flowered grass-pink	<i>Calopogon multiflorus</i>	N	T	None
Chapman's sedge	<i>Carex chapmannii</i>	N	T	None
sand butterfly pea	<i>Centrosema Arenicola</i>	N	E	None
Piedmont jointgrass	<i>Coelorachis tuberculosa</i>	N	T	None
Tampa vervain	<i>Glandularia tampensis</i>	N	E	None
Pondspice	<i>Litsea aestivalis</i>	N	E	None
pygmy pipes	<i>Monotropis reynoldsiae</i>	N	E	None
Narrowleaf Naiad	<i>Najas filifolia</i>	N	T	None
celestial lily	<i>Nemastylis floridana</i>	N	E	None
Britton's beargrass	<i>Nolina brittoniana</i>	E	E	None

Table 3.3-2: Pasco County Listed Species, Regulatory Status, and Probability of Occurrence with the Laydown Area

Common Name	Scientific Name	Federal Status	State Status	Probability of Occurrence
hand fern	<i>Ophioglossum palmatum</i>	N	E	None
widespread polypody	<i>Pecluma dispersa</i>	N	E	None
Comb Polypod	<i>Pecluma ptilota</i> var. <i>bourgeauana</i>	N	E	None

Flora – Threatened, endangered, and/or plant species of special concern known to occur in Pasco County and their probability of occurrence in the Site and temporary parking and construction laydown area are listed in Table 3.3-2. The FNAI database review indicated one reported occurrence of listed plant species within 5 miles of the Project, i.e., pondspice (*Litsea aestivalis*). No listed plant species were observed within the Site or temporary parking and construction laydown area during field reconnaissance efforts in August and October 2017 and in January and April 2023. Furthermore, due to the lack of suitable upland and wetland habitats and significant alteration of the upland habitats present, it is not likely any listed plant species potentially occurring within Pasco County are present within the SHCCF Site or the temporary parking and construction laydown area. Federally and state-listed plant species that were identified from the FNAI database review as occurring within 5 miles of the Site or that have the potential to occur within the Site or temporary parking and construction laydown area based on the presence of suitable habitat are discussed below.

Pondspice - Pondspice is classified as endangered in the State of Florida, but is not listed by the USFWS. It is a shrub which is found in wetland habitats such as cypress domes, freshwater ponds and shrub marshes in pine flatwoods, and along the edges of baygalls (FNAI, 2001). No individuals were observed on the Site or the temporary parking and construction laydown area during field reconnaissance, and no areas of suitable wetland habitat are present, therefore there is no likelihood of occurrence within these areas.

Fauna - Threatened, endangered, and/or animal species of special concern known to occur in Pasco County and their probability of occurrence within the Site are listed in Table 3.3-2. The FNAI database review indicated reported occurrences of four listed animal species in the vicinity of the Site – Southeastern American kestrel (*Falco sparverius*), Florida pine snake (*Pituophis melanoleucus mugitus*), short-tailed snake (*Lampropeltis extenuate*), and gopher tortoise.

Although no longer classified as threatened or endangered, the bald eagle (*Haliaeetus leucocephalus*) is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. According to the FWC bald eagle nest location database, the closest documented bald eagle nests (nest ID #PS008 and PS031) are approximately 3 miles to the northeast and southwest, respectively, of the Site. No bald eagle nests were observed within the Site or the temporary parking and construction laydown area during the field reconnaissance.

The only listed species observations within the Site or temporary parking and construction laydown area during the field reconnaissance efforts were one gopher tortoise and several gopher tortoise burrows. A brief description of species either observed, identified from the FNAI database review as occurring within 5 miles of the Site, or with a potential to occur within the Site or temporary parking and construction laydown area is provided below.

Gopher Tortoise (T) – The gopher tortoise is classified as threatened by the FWC but is not listed federally by the USFWS in Florida. The gopher tortoise is a large terrestrial turtle that primarily forages on herbs and forbs. Its carapace is a dark brown or grayish brown color, while the plastron is much lighter in color, typically yellow or somewhat tan. Gopher tortoises have stumpy, elephant-like hind feet and flattened, shovel-like forelimbs that are used for digging burrows (FWC, 2017). The gopher tortoise excavates burrows with these forelimbs for shelter from temperature extremes, predators, and refuge from fires. Burrows are excavated in well-drained, sandy soils typically associated with upland habitats such as palmetto prairies, dry pine flatwoods, turkey oak sandhills, and xeric scrub throughout peninsular Florida. The gopher tortoise will also excavate burrows in disturbed habitats such as pastures and old fields (FNAI, 2001). It is considered a keystone species as hundreds of commensal species, such as the listed eastern indigo snake and Florida pine snake, have been documented to utilize gopher tortoise burrows for their own survival needs. During the field reconnaissance of the Site, several gopher tortoise burrows were observed within areas classified as Vacant Land (FLUCFCS 190). Potential habitat for the species exists throughout the Site and the temporary parking and construction laydown area.

Florida Pine Snake (T) – The Florida pine snake is classified as threatened by the FWC, but is not listed federally by the USFWS. The Florida pine snake is a large, non-venomous snake which can be found throughout most of the panhandle and peninsular Florida. It has a brown back with dark blotches, white belly, ridged scales, small head, and pointed snout (FNAI, 2001). It prefers open xeric habitats with well-drained, sandy soils such as longleaf pine-turkey oak sandhill, sand pine scrub, and scrubby flatwoods. Similar to the eastern indigo snake, they are known commensal species of gopher tortoise burrows. The FNAI database review indicated one reported occurrence of the species within 5 miles of the Site. Although no individuals were observed during the field reconnaissance and their probability of occurrence is low, potential refugia in the form of gopher tortoise burrows were observed and adjacent areas to the north and east of the Site may provide suitable habitat.

Short-tailed snake (T) – The short-tailed snake is classified as threatened by the FWC but is not listed federally by the USFWS. It is a small, non-venomous snake which is endemic to Florida. The species is cryptic and fossorial in nature. It can be found mainly from the north central to central portion of peninsular Florida. It prefers xeric habitats such as longleaf pine flatwoods, turkey oak sandhills, and scrubby oak communities (FWC, 2017). The FNAI database review indicated one reported occurrence of the species within 1.5 miles of the Site. No individuals or signs of their presence were observed during field reconnaissance. The mixed hardwood-conifer (FLUCFCS 434) habitat in the northeastern portion of the Site and the live oak hammock (FLUCFCS 427) in the eastern portion of the temporary parking and construction laydown area may provide suitable habitat for the species, but the likelihood of its presence is low due to extensive and frequent disturbance to the soil and groundcover vegetation from hog rooting, and the proximity to industrial development. Suitable habitat for the species may exist in adjacent areas to the north and east of the Site.

Southeastern American Kestrel (T) – The Southeastern American kestrel is classified as threatened by the FWC, but is not listed federally by the USFWS. The Southeastern American kestrel is a small raptor which preys upon insects, small mammals, and small birds. It prefers to nest in open fields and woodlands and pine savannah habitats with large, dead trees containing excavated cavities (FWC, 2017). The FNAI database review indicated one reported occurrence of the species within 1 mile of the Site. However, since the Site and temporary parking and construction laydown area lack large dead trees with cavities suitable for nesting by the species, nesting habitat is not present in these areas. Therefore, the likelihood of the Southeastern American kestrel occurring in these areas is low.

Eastern Indigo Snake (T) – The eastern indigo snake is classified as threatened by both the FWC and USFWS. The eastern indigo snake is a non-venomous, bluish-black colored snake that can reach lengths of eight feet. Its chin, cheek, and throat are mostly red or brown, but can also be white or black. Most indigo snakes have smooth scales, although adults do have keels (ridges) on the front of some of their scales (FNAI, 2001). Eastern indigo snakes inhabit pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. They can be found throughout Peninsular Florida (FWC, 2017). This species occasionally utilizes gopher tortoise burrows as refugia, especially during the winter months in the northern portion of the state. No individuals were observed during the field reconnaissance of the Site and the temporary parking and construction laydown area, and the FNAI GIS database did not report any occurrences of the species within 5 miles of the Site. Although the potential of occurrence is low, potential refugia in the form of gopher tortoise burrows were observed within the Site and temporary parking and construction laydown area, and adjacent areas to the north and east of the Site may provide suitable habitat for the species.

3.3.2 Environmental Consequences

The Preferred Alternative

The greatest pre-existing stressor to the ecosystem is the loss of natural wildlife habitats that previously existed in and around the Project area prior to the development of the land for industrial, utility, commercial, and residential uses. The natural topography and soils have been previously altered due to vegetation clearing and topographic grading. The majority of natural ecosystems and wildlife habitat which may have previously been located within the Site has been lost. The potential for utilization of the Site by most terrestrial listed species for foraging, roosting, or breeding is limited due to the significant alteration of the upland habitats present, as well as surrounding uses.

Due to the previously disturbed nature of the lands on and around the SHCCF Project Site, temporary parking, and construction laydown area, impacts to listed species are expected to be minimal as the area currently provides subpar habitats for wildlife such as birds, amphibians, and reptiles that are common to the area.

No impacts to aquatic species or ecosystems are expected due to the absence of wetlands and aquatic systems located on the SHCCF Site and the temporary parking and construction laydown areas. Potential impacts to the eastern indigo snake will be addressed through compliance with USFWS's Standard Protection Measures for the Eastern Indigo Snake. Potential impacts to gopher tortoises will be addressed through pre-construction surveys and relocation of any gopher tortoises in accordance with FWC requirements.

No Build Alternative

Under a "no build" scenario, the site would remain vacant.

3.3.3 Mitigation Measures

In accordance with the FDEP Conditions of Certification, the FWC requires SHEC to conduct a 100 percent survey for gopher tortoises (*Gopherus polyphemus*), in accordance with the FWC-approved Gopher Tortoise Management Plan and the FWC-approved Gopher Tortoise Permitting Guidelines. The survey must effectively locate and mark all potentially occupied tortoise burrows and SHEC must provide the FWC a detailed gopher tortoise relocation plan in accordance with the Gopher Tortoise Management Plan and Gopher Tortoise Permitting Guidelines. The information must include details on the location for on-site recipient areas and any off-site FWC-approved temporary contiguous habitat, as well as appropriate mitigation contributions per tortoise, as outlined in the Gopher Tortoise Permitting Guidelines. Additionally, the Gopher Tortoise Permitting Guidelines specify that any commensal species observed during the burrow excavations that are listed by the FWC shall be relocated in accordance with the

applicable guidelines for that species. SHEC will notify the USFWS 30 days prior to any clearing/land alteration activities to confirm that the Eastern Indigo Snake Standard Protection Measures will be implemented.

3.4 Water Resources

3.4.1 Affected Environment

No major or navigable watercourses or waterbodies are located within or adjacent to the project boundary. Surface runoff is very limited and natural surface drainage features are not well developed. The site is located in the upper reaches of the Bear Creek Basin very near the drainage divide between the Pithlachascotee River and Double Hammock Creek drainage basins. Crews Lake and the Pithlachascotee River are more than 1 mile east of the Site, and east of Highway 589 (See Figure 9). Potential impacts to water quality from this Project are expected to be non-existent.

Floodplains

The Federal Emergency Management Agency (FEMA) maps for the SHCCF Site are shown as an overlay to the aerial image of the Site in Figure 10. As recorded on the Flood Insurance Rate Map (Panel No. 12101C0206F), the SHCCF Site is situated within Zone X, which is an area that is determined to be outside of the 100- and 500-year flood zones.

Water Use

The SHCCF primary water uses include cooling, process, service, potable, and irrigation. Cooling water is required for condenser and auxiliary cooling and the associated equipment. Process water is required for combustion turbine inlet air cooling and steam cycle makeup. Other water uses include service water for internal plant uses including fire protection, equipment washing, and potable water for employee use. To the extent landscape irrigation will be needed, reclaimed water will be used, and the amounts are expected to be minimal. The process flow diagram for SHCCF is provided in Figure 13.

The primary water source for cooling, process, and irrigation will be reclaimed water from Pasco County's SHWWTF and the interconnected Pasco County Master Reuse System (PCMRS). SHEC estimates that approximately 2.5 million gallons per day (MGD) (907.4 million gallons per year), with a maximum of 3.0 MGD, of reclaimed water will be used on an annual average daily basis to operate the SHCCF. The maximum monthly usage most likely will occur during the months of July, August and/or September, when the air temperatures are highest and when duct firing and the evaporative cooler are used. The reclaimed water supply for the facility will include reclaimed water that is not currently being used and may include reclaimed water that would otherwise be used by customers for non-potable uses such as lawn watering.

If reclaimed water is not available at the required quality or quantity, Pasco County would supply up to 3.5 MGD of potable water as an emergency backup source. The potential use of potable water as an emergency source for cooling is expected to be infrequent. The use of emergency potable water will be limited by the County to ensure that it is able to maintain adequate pressure in its potable water system to serve other needs. Potable water and service water, which includes fire water, will be supplied by the Pasco County municipal system. The estimated annual average daily usage of service and potable water from Pasco County will be 0.011 MGD (3.68 MGY). The use of reclaimed water for cooling, process, and irrigation eliminates direct impacts to groundwater supplies from operation of the SHCCF. Indirect impacts to groundwater supplies would be limited to the consequences of evaporation of the reclaimed water from the SHCCF cooling system rather than infiltration of some of the reclaimed water into the ground from the infiltration basins associated with the PCMRS system.

Industrial Wastewater

There will be no discharge of cooling or process water to surface or ground waters from the SHCCF. All produced wastewater streams will be internally recycled through the ZLD system including: blowdown from the evaporative cooler and HRSG; wastewater from the process wastewater treatment system; wastewater from the makeup demineralizer system; and water collected in plant and equipment drains after treatment in an oil/water separator. Solids will be concentrated and removed from the wastewater using ultra-filtration, RO systems, electro-deionization, and a brine concentrator and crystallizer. The ZLD system allows for the treatment and reuse of any industrial wastewater produced during operation of the SHCCF. Consequently, there is no need for surface water discharge structure(s) and consequently no NPDES permit for wastewater discharges are required for the SHCCF.

Stormwater

Surface runoff from the SHCCF Project is estimated to be zero to 6 inches per year to the surface drainage system. A comprehensive stormwater pollution prevention plan will be prepared and implemented, as required under the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities. Due to the use of the two stormwater ponds and the high percolation rates at SHCCF, no discharge of stormwater to surface waters during operation is anticipated.

3.4.2 Environmental Consequences

The Preferred Alternative

Adverse impacts to surface water or groundwater resources are not anticipated as a result of construction and operation of the SHCCF Project. Any adverse impacts are not expected to be significant.

No Build Alternative

Under a “no build” scenario, no impacts to surface or groundwater resources would occur as a result of the construction and operation of the SHCCF.

3.4.3 Mitigation Measures

Potable water and service water, which includes fire water, will be supplied by the Pasco County municipal system in accordance with the Utility Service Agreement. That Agreement imposes limits on the extent to which the County will supply potable water for emergency use as cooling water, requiring that certain pressures be maintained in the County’s potable water system to ensure continued operation of the system. SHEC is preparing plans to add on-site reclaimed water storage to further minimize any potential need for potable water as a backup supply for cooling on an emergency basis.

All produced wastewater streams will be internally recycled through the ZLD system including: blowdown from the evaporative cooler and HRSG; wastewater from the process wastewater treatment system; wastewater from the makeup demineralizer system; and water collected in plant and equipment drains after treatment in an oil/water separator. With the use of this system there will be no discharge to surface or ground waters.

A comprehensive stormwater pollution prevention plan will be prepared and implemented, as required under the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities. Due to the use of the two stormwater ponds and the high percolation rates at SHCCF, no discharge to surface waters during operation is anticipated.

3.5 Cultural Resources and Historic Properties

The SHCCF Site consists of lands that are privately owned. Portions of these lands have been utilized for activities to support construction and equipment storage associated with the existing SHGS since 2002.

3.5.1 Affected Environment

A cultural resource desktop analysis was conducted by Shady Hills Power Company, L.L.C. (SHPC) with the intent to expand the existing SHGS in 2012. The analysis consisted of the review of the Florida Master Site File (FMSF). The FMSF serves as an archive and repository of information about Florida's recorded cultural resources that are listed, eligible, or potentially eligible for listing on the National Register of Historic Places pursuant to the National Historic Preservation Act (NHPA) and resources with potential or confirmed human remains. In addition, SHPC coordinated with the Florida Division of Historical Resources (DHR) and conducted a CRAS covering the Project Site. The analysis was provided to DHR and a letter of concurrence was issued by the DHR on August 27, 2018 that confirmed that no indications of significant archaeological or historical resources were recorded in the Project area. The letter noted that there was some potential for undiscovered archaeological resources and the DHR recommended that special conditions should be implemented if discoveries were made during construction activities (See Appendix E – DHR Communication). This recommendation was also included in the Agency Report that DHR submitted to FDEP as part of the site certification proceedings.

The temporary construction laydown area was identified by DHR to have the potential for significant archaeological or historical resources recorded with DHR. A CRAS was undertaken and submitted to DHR. The CRAS concluded that the proposed laydown area will have no adverse effect on cultural resources listed or eligible for listing in the NRHP and no further investigations were warranted within the area of potential effect (APE). The DHR concurred on April 12, 2018 (See Appendix E).

3.5.2 Environmental Consequences

The Preferred Alternative

Phase I cultural resource assessment surveys have been completed for the SHCCF Project Site and the temporary construction parking and laydown area. Based on these surveys, the archeological consultant concluded that there will be no adverse impacts to properties listed or eligible for listing in the National Register of Historic Places (NRHP). The Division of Historical Resources issued letters of concurrence dated August 27, 2018, April 12, 2018, June 7, 2018 and April 3, 2019 and agreed with the conclusion that there were no significant archaeological or historical resources recorded in the SHCCF project area listed or eligible for listing in the NRHP (See Appendix E – DHR Communication).

No Build Alternative

Under a "no build" scenario, there would be no impacts to cultural resources. Thus, the outcome under a "no build" scenario would be the same as with the preferred alternative.

3.5.3 Mitigation Measures

In accordance with the Conditions of Certification, if historical or archaeological artifacts or features are discovered at any time within the SHCCF Project Site, the DEP and DHR will be notified to determine appropriate action. Additionally, if alterations associated the reconfiguration of the Project Site are required, the DHR will be consulted to determine if additional cultural resource surveys are required (See Appendix B-II.6).

3.6 Aesthetics

3.6.1 Affected Environment

The existing project site is predominately vacant. The area adjacent to the Project Site is developed with industrial/utility uses to the north, south, and west. The area to the east is land that is predominantly vacant, privately owned and planned for electric utility use. There are no federally governed, regional, scenic, cultural or natural landmarks within a 5-mile radius of the project site. Due to the industrial/utility developments adjacent to the Project site, there are limited recreational and community facilities in close proximity to the Project Site.

3.6.2 Environmental Consequences

The Preferred Alternative

The Project will not impact any of the state, county and private land holdings that serve the purpose of environmental conservation, education, and protection in the region, since none of these areas are in close proximity to the Project Site and none of these areas would be disrupted or impacted (directly or indirectly) by the construction or operation of the SHCCF. The addition of a power plant line next to an existing power plant and close to a wastewater treatment plant and resource recovery facility as well as other facilities will not significantly impact the aesthetics of the area.

No Build Alternative

Under a “no build” scenario, the site would remain vacant and the aesthetics of the area would not be affected by the presence of the SHCCF.

3.6.3 Mitigation Measures

The Project will not result in adverse visual interruptions or obstructions in the adjacent areas or areas that are outside of the immediate area. Landscape and buffering plans will be developed in accordance with Pasco County LDC Section 905.2, which will include a ten-foot (10') wide vegetative buffer of trees and evergreen shrubs along the perimeter of the eastern and southern boundary of the site and a vegetative buffer along the northern boundary.

3.7 Socioeconomics and Community Resources

The Project Site is located within unincorporated Pasco County. In reviewing potential Project-related impacts to minority and low-income communities, Seminole used a study area that included the area within one mile of the Project site. Seminole selected this area to consistent with the study area defined for purposes of the PPSA siting process. This study area encompasses the region within which any significant direct or indirect adverse impacts to communities would be expected to occur.

3.7.1 Affected Environment

There are no incorporated areas (e.g., city, town, or village) within a one-mile radius (study area) of the Project Site. Utilizing 2020 US Census data, the demographic and social-economic characteristics of the study area were reviewed. Based on these characteristics a screening evaluation was also conducted to determine if potential environmental justice communities were present. The screening evaluation was conducted in accordance with the CEQ guidance (USEPA CEQ, 1998).

As shown in Figure 11, the study area consists of portions of six individual Census Tract, Block Groups (CTBGs): Block Group 1, Census Tract 312.07, Pasco County, Florida; Block Group 1, Census Tract 312.08, Pasco County, Florida; Block Group 1, Census Tract 318.06, Pasco County, Florida; Block Group 1, Census Tract 318.08, Pasco County, Florida; Block Group 2, Census Tract 318.08, Pasco County, Florida, and Block Group 1, Census Tract 318.09, Pasco County, Florida. The SHCCF Project is located within Block Group 1, Census Tract 312.08. For the

evaluation, the host CTBG (CTBG 318.08 BG1) – the CTBG within which the Project Site is located – was compared to the one-mile study area and two reference jurisdictions, Pasco County and the state of Florida.

Socioeconomics

Within a one-mile study area there is a population of approximately 12,126 people, with the majority identifying as white alone, not Hispanic or Latino (86%). Within the area that comprises CTBG 318.08 BG1, there are approximately 2,612 people, with approximately 83% identifying as white alone, not Hispanic or Latino, compared to 62% of the population in Pasco County and 51% of the population in the state of Florida identifying as white alone, not Hispanic or Latino.

The estimated median household income in the study area ranged between \$35,441 (Census Tract 312.07, BG1) and \$77,155 (Census Tract 318.09, BG1), with an estimated median income of \$56,500 in the area that comprises CTBG 318.08 BG1. The estimate in Pasco County is \$77,137 and in the state of Florida is \$76,199 (U.S. Census Bureau, 2023).

Within the study area, there were approximately 4,488 housing units, with 91% being occupied and approximately 83% being owner-occupied units. The average household size within the study area was approximately 3 people (US Census Bureau, 2023). Within the area that comprises CTBG 318.08 BG1, there were 753 housing units, with 89.5% being occupied and approximately 88% being owner-occupied units. The average household size within the area that comprises CTBG 318.08 BG1 was 3.8 people. By comparison, 87% and 85% of the housing units in the County as a whole and the State were occupied with 75% and 67% of the occupied units being owner-occupied.

Approximately 9,490 people in the study area were identified as over the age of 16, with 60% of this population identified as in the labor force. The vast majority of this labor force was civilian labor (99.81%), with less than 1% in the Armed Forces. The area has an unemployment rate of approximately 4.20%. Within the area that comprises CTBG 318.08 BG1, 2,045 people were identified as over the age of 16, with 56% of this population identified as within the labor force, and 100% of them were civilian labor, over 96% were employed and only 3% were unemployed.

Environmental Justice

Minority Community/Population

Utilizing 2022 U.S. Census data, the racial and ethnicity characteristics of the individual CTBGs, the study area, and the two reference communities (Pasco County and the State of Florida) were identified and analyzed.

A minority community (also referred to as a minority population) is one that is identified or recognized by the US Census Bureau as Hispanic or Latino, African American or Black, Asian and Pacific Islanders or American Indian. Therefore, any community with a racial or ethnic minority population that is equal to or greater than 50 percent of the population or with a minority population that is 1.5 times greater than the minority population percentage in the total population, is considered to be a minority community and a potential environmental justice area (USEPA CEQ, 1998).

Based on the review of census data for the study area, there were no identified communities that have indicators of a minority race (e.g., African American or Black, Asian and Pacific Islanders or American Indian races) (US Census Bureau, 2023). There is one CTBG that has indicators of a minority population – Census Tract 318.08, BG2, which has 53 percent of its population identifying as Hispanic or Latino. The study area has an estimated 15 percent of the population identifying as Hispanic or Latino, compared to an 18 percent minority population for Pasco County and 27 percent minority population for the state of Florida. Thus, the study area has a smaller Hispanic/Latino

population percentage than either the County as a whole or the State and would not be considered a potential environmental justice community on that basis.

Low-Income Communities

Utilizing 2022 U.S. Census data, the median household income, average/household size, and percentage of the population living below the poverty line were identified and reviewed for the individual CTBGs, the study area, the County and the State.

The Census Bureau does not have an official or standard definition of “low-income.” According to Bureau guidelines, when a household’s total income is less than the official poverty threshold for a household of similar size and composition, the household is considered to be “living below the poverty line” (U.S. Department of Health & Human Services 2021). The threshold is determined based on the median household income for a designated area as well as the size of the household. Based on these guidelines, the weighted average poverty threshold (in 2021 \$) for the study area has been identified as \$13,011 for a household of one, \$16,521 for a household of two, \$20,335 for a household of three, and \$26,172 for a household of four.

Based on the review of census data for the study area, the estimated median household income ranges from \$35,441 (Census Tract 312.07, BG1) to \$77,155 (Census Tract 318.09, BG1), with an average of \$50,610 across the study area. The reported incomes within the study area were on average lower than the County and State estimates (U.S. Census Bureau, 2023). For the state of Florida, the estimates were \$76,199, while in Pasco County the estimate is slightly higher at \$77,137.

Across the study area, the average household size was less than 3 people (US Census Bureau, 2023), therefore, the weighted average poverty threshold (in 2021 \$) for the average household would be approximately \$20,335. Although the estimate across the study area indicates a lower median household income compared to the reference jurisdictions (the County and the State), the median income in the study area does not identify the area as a potential environmental justice community (based on income-related influences) in light of Bureau guidelines, with the median income levels substantially exceeding the weighted average poverty threshold. In addition, although Census Tract 318.08, BG2 could be considered a potential environmental justice community based on origin/ethnicity characteristics and total minority population characteristics, this community has a reported median household income of \$76,265 which is comparable to both the County and State estimates and is one of the higher income figures across the study area.

3.7.2 Environmental Consequences

The Preferred Alternative

The demographic, social and economic characteristics of the study area (the area within one mile of the SHCCF project site) were identified and analyzed. This assessment also provided information concerning potential environmental justice communities within the study area. Based on the findings of the analysis, there were no identified communities that have indicators of a minority race, although there appears to be a significant presence of Hispanic or Latino population in one of the communities that is located to the south of the SHCCF Project location. Specifically, within Census Tract 318.08, BG2, 53 percent of the population identify as Hispanic or Latino. The study area did not have a location that could be considered a potential environmental justice community based on incomes.

The analysis also considered potential language barriers within Census Tract 318.08, BG2. For example, the majority of the population within the study area identified English as their primary language. In scenarios where the

population identified a language other than English as their primary language, the majority identified as Speaking English “very well” or “well.” Therefore, providing SHCCF Project materials or providing resources to respond to comments/questions on the Project in Spanish could (e.g., the other primary language identified within the study area) could be beneficial to support project communication but language barriers are not considered to be a significant issue within the study area.

The identification of environmental justice communities takes into account various factors, including race/ethnicity and/or income. While Census Tract 318.08, BG2 has a population with an estimate that is slightly above the 50% threshold based on race/ethnicity, the median income levels in the Census Tract are comparable to the median income levels in the County and State as a whole, which are substantially above the poverty level (See Figure 11). Moreover, a review of the demography of the study area shows that the residents of the Census Tract who identify as Hispanic or Latino are predominantly located in the southern portion of CTBG 318.08 BG2 and outside of the study area. Thus, given that majority of the population in this CTBG is located more than a mile from the Project Site, this population is not an area that is economically disadvantaged. Majority of the population is Hispanic/Latino, but this community would not give rise to environmental justice concerns associated with the construction and operation of the SHCCF, particularly in light of the de minimis environmental impacts of the Project in addition to the populations distance to the Project site (See Figure 12).

In short, there appear to be no areas that would be subjected to disproportionate impacts from the SHCCF Project.

No Build Alternative

Under a “no build” scenario, current socioeconomic conditions in the area would remain unchanged. There would be no adverse impacts to surrounding communities and the economic benefits of the construction and operation of the SHCCF in terms of job creation and tax revenue would not be realized.

3.7.3 Mitigation Measures

The SHCCF Project is expected to result in positive economic impacts for Pasco County and the surrounding area through economic output, employment opportunities, wages, and community employment growth. During construction, direct and indirect economic benefits will include construction jobs, purchase and rental of equipment and materials, housing and living expenses for workers, and indirect employment that will be needed to accommodate the influx of workers to the area. The operation of the SHCCF will have both direct and indirect economic benefits, including capital expenditures, operation and maintenance expenditures, employment, and property tax revenues.

3.8 Noise

The SHCCF Site is located in a moderate-level ambient noise environment with mixed industrial and commercial land uses in the immediate vicinity of the SHCCF Project. The nearest residential locations are approximately 0.5 miles northeast and west of the Site boundary. Additionally, two schools are approximately 0.5 to 0.7 miles northeast and to the southwest.

3.8.1 Affected Environment Construction

Construction will require installation of foundations and erection of major components of the combined cycle unit such as the CTG, HRSG, auxiliary cooling system, STG and associated facilities. The use of construction equipment such as trucks, cranes, lifts, and air compressors will be required. These sources have maximum noise levels ranging from approximately 70 to 85 dBA (measured at a distance of 50 ft).

The noise levels resulting from these combinations of equipment were combined and modelled as one area source located where construction activities are expected. Octave bands were estimated mainly from field measurements collected by Golder and from “Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances” (EPA, 1971). Only the atmospheric attenuation and ground absorption options were enabled during the noise modeling runs.

All predicted noise levels intended to reflect SHCCF construction activities, which include current background noise levels, are expected to be short in duration and not near levels that would affect the health or wellbeing of humans at those receptors.

The Pasco County noise ordinance states that no construction activities are permitted between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday and all day Sunday that produce noise exceeding 55 dBA measured at the nearest property line of an adjacent residential area. However, there are no residential areas adjacent to the Project Site, so these limits do not apply. Nevertheless, noise levels associated with construction are expected to meet ordinance standards at the nearest residential areas. Most construction activities are not expected to take place during the nighttime hours or on Sunday in any event.

Operation

The noise impacts of operations were evaluated using the sound power levels for the various types of sources associated with the SHCCF. The noise resulting from the operation of a combined cycle unit includes noise sources associated with the CT and associated electric generator; one HRSG; one steam turbine generator; transformer; one auxiliary cooling system; and associated pumps, modules, and accessories. The sound power levels used in the analysis for the 1-on-1 combined cycle unit were based on information developed from manufacturers that has been field-verified using actual field measurements of similar units.

3.8.2 Environmental Consequences

The Preferred Alternative

The design of the SHCCF includes components that mitigate noise from being emitted to the surrounding environment, and the orientation of the noise sources further attenuates noise. The majority of the noise sources, such as the steam turbine, gas turbine, electric generator, and compressor, are located within enclosures that mitigate sounds emitted by equipment.

There are no Florida or federal non-OSHA noise regulations applicable to the Project. The SHCCF site is located within unincorporated Pasco County Florida, which has a noise ordinance which establishes maximum permissible sound levels for residential and commercial (zoning) districts as received at the property line. For example, the Pasco County noise ordinance states that no construction activities are permitted between the hours of 10:00 p.m. and 7:00 a.m. Monday through Saturday and all day Sunday that produce noise exceeding 55 dBA measured at the nearest property line of an adjacent residential area. Similarly, the ordinance states that the maximum permitted noise level emanating from an industrially zoned district, as measured at the closest adjacent residentially zoned property line for the hours between 6:00 p.m. and 7:00 a.m. Monday through Saturday and during all hours of Sunday is 55 dBA. However, there are no residential areas adjacent to the Project Site, so these limits will not apply to construction or operation of the SHCCF. Most construction activities are not expected to take place during the nighttime hours or on Sunday in any event.

No Build Alternative

Under a “no build” scenario, conditions at the site would remain unchanged and there would be no changes in noise levels associated with the site.

3.8.3 Mitigation Measures

The SHCCF project is located in an industrial area of Pasco County. There are no residential zoned parcels adjoining or within the vicinity of the SHCCF project. Although not required, the Project design includes sound attenuation measures.

3.9 Transportation

Federal and State roadways providing access to the SHCCF area include Interstate 75, SR589 (Suncoast Parkway), and SR52. Primary access during construction and operation of the SHCCF include SR 52, Hays Road, Hudson Avenue, Softwind Lane, and Merchant Energy Way. A traffic impact study to evaluate construction and operation of the SHCCF was conducted in 2018. Federal and State roadways providing access to the SHCCF area include Interstate 75, SR589 (Suncoast Parkway), and SR52.

3.9.1 Affected Environment Construction

Roadways that could be used during construction include Interstate 75, SR589/Suncoast Parkway, and SR52. County roadways that could be used during construction include Hays Road, Hudson Avenue, and Softwind Lane. Primary construction access to the Site will be provided by Hays Road (north of SR52), Hudson Avenue, to Softwind Lane. From these existing roadways, construction trucks will enter the secured property and be directed to the proposed construction laydown area. Within the Site, the existing driveways are both paved and unpaved. The areas that are unpaved will be reinforced with gravel and dust suppression measures that will be in place for the duration of the construction period.

The construction workforce for the Project is expected to average approximately 230 workers per day with approximately 370 workers per day during peak construction. Under worst-case conditions there will be 370 inbound vehicles during the AM peak hour and 370 exiting vehicles during the PM peak hour. In addition, during construction an estimated 13 trucks will arrive daily with supplies to the SHCCF Site.

A traffic management plan will be developed for the project to include the appropriate traffic management and improvements, as necessary, to maintain acceptable level of service for the access points. Additionally, traffic management practices will be implemented during the peak AM and PM hours pertaining to employee trips, such as car-sharing practices or staggering construction traffic over a longer period time if needed.

Operation

During operation, vehicles will enter the SHCCF via Softwind Lane, which is located off Hudson Avenue and Hays Road, both of which are collector roads for SR 52. A traffic impact study from construction and operation of the SHCCF was previously conducted. SR52, Hays Road, and Hudson Avenue operate at a better Level of Service design standard than currently rated.

3.9.2 Environmental Consequences

The Preferred Alternative

The additional traffic associated with construction-related activities will be temporary and is not anticipated to degrade or result in a long-term impact on the existing roadways.

The operational workforce for the SHCCF is not anticipated to significantly increase traffic, and no adverse impacts to traffic are anticipated during operation.

Changes to the existing roadway system are not required to meet SHCCF Project needs.

No Build Alternative

Under a “no build” scenario, no changes to traffic patterns would occur.

3.9.3 Mitigation Measures

Primary access routes during construction and operation of the SHCCF include SR 52, Hays Road, Hudson Avenue, and Softwind Lane. During construction of the SHCCF, traffic management practices will be implemented during the peak AM and PM hours to facilitate ingress and egress. The contractor for the SHCCF will develop a traffic management plan to include the appropriate traffic management, as necessary, to maintain acceptable Level of Service for access during peak construction employment.

The operational workforce for the SHCCF is not anticipated to significantly increase traffic, and no adverse impacts to traffic are anticipated during operation. Changes to the existing roadway system are not required to meet SHCCF Project needs.

3.10 Human Health and Safety

There are no human health and safety concerns associated with the project. Noise levels during construction are expected to be short in duration and not near levels that would affect the health or wellbeing of humans at offsite receptors.

3.10.1 Affected Environment

Induced currents from EMF produced by the transmission interconnection tie-line are limited to FDEP requirements for electric and magnetic field magnitudes on the right-of-way and at the edge of the right-of-way. The Pasco County Order approving the Special Exception includes a determination that the proposed power plant and transmission line “is consistent with the adopted Pasco County Comprehensive Plan and would not have an adverse effect on the health, safety and welfare of the public.”

3.10.2 Environmental Consequences

The Preferred Alternative

There are no human health and safety concerns associated with the Project.

No Build Alternative

Under a “no build” scenario, no changes to human health and safety would occur.

3.10.3 Mitigation Measures

Sanitary wastes from the operation of SHCCF will be discharged to Pasco County’s sanitary sewer system.

All solid (non-hazardous) and hazardous wastes produced or associated with the SHCCF will be managed according to the federal, state, and local regulations. All non-hazardous solid waste will be collected and transported off-site by private licensed waste collection companies for disposal at a FDEP-permitted facility. All hazardous waste produced at the SHCCF will be collected on-site and disposed of off-site by a licensed hazardous waste contractor.

An approved commercial solid waste contractor will collect and transport the solid wastes for disposal in accordance with state regulations. Natural gas and Ultra Low Sulfur Distillate fuel are the only proposed fuels for the SHCCF; therefore, solid waste combustor ash management is not proposed for the SHCCF.

DRAFT

4.0 TIE-LINE CORRIDOR

The electrical interconnection for SHCCF will consist of a single circuit 230-kV interconnection tie-line that will extend from the northeast corner of the north boundary of the SHCCF Project Site and extend west across Pasco County-owned property to a new substation located adjacent to Duke Energy Florida's existing 230 and 500 KV transmission system.

The transmission corridor is about 0.6 mile in length, 200-feet wide and traverses property of a single owner, Pasco County. The corridor for the interconnection tie-line was established by reviewing the existing physical, biological and land use conditions between the SHCCF Site and Duke Energy Florida's existing 230 and 500 KV transmission system while minimizing impacts to the existing physical and biological resources and land uses.

Corridor Description

Figure 14 depicts the location of the proposed corridor which is at a scale of 1:24,400. The corridor is oriented east to west and abuts the north boundary of the Certified Site and extends approximately 0.6 miles to the west to abut Duke Energy Florida's existing 230 and 500 KV transmission system. The corridor is 200 feet wide and encompasses approximately 13.7 acres.

Alternate Corridors

Alternative corridor alignments north and south of the proposed corridor were considered for the electrical interconnection tie-line. The alternatives would have required greater land disturbance and/or relocation of existing County infrastructure associated with the Shady Hills Wastewater Treatment Plant or the Pasco County Resource Recovery Facility. As a result of the potential relocation impacts, the alternative corridors were eliminated from further consideration.

Access Roads

Existing access will be sufficient to access the proposed electrical interconnection tie-line corridor. Access includes both Hays Road, a County public road that provides access to Pasco County's public works facilities that surround the proposed corridor and the driveway that provides access to the Shady Hills Wastewater Treatment Plant and Pasco County Solid Waste Resource Recovery Facility.

Zoning and Land Use Plans

The following subsections present a summary of the comprehensive plan and zoning-related topics for the transmission interconnection tie-line.

Land Use

According to the Pasco County Future Land Use Map, the transmission corridor and directly adjacent property is located within the P/SP Major Public/Semi-Public future land use designation (Figure 15). The intent of the P/SP designation is to recognize major existing and programmed public/semi-public facilities, primarily those facilities associated with public or private utilities. The general range of identified uses includes major utility transmission corridors (Comprehensive Plan, Pasco County).

Additionally, as indicated in the Future Land Use Element of the Comprehensive Plan, public and semipublic uses, such as central utility systems, are permitted where they provide support for the general area. Specifically, Future Land Use Element, Policy FLU 3.2.2 states: "Private electric public utilities needed to support growth may be permitted in all land use designations." These needed utilities are then subject to the following..."c) All new power

plants and transmission lines shall be subject to applicable State and Federal siting regulations and shall be consistent with the Goals, Objectives and Policies of this Comprehensive Plan.”

The transmission corridor is located outside of sensitive lands and areas of special concern, such as rivers, lakes, wetlands, floodplains, natural vegetation communities, wells, wellfields, and 5 and 10-year protection areas, coastal high hazard areas, and evacuation routes.

The corridor is encircled by utility-type uses, with which the corridor will be compatible. Specifically, to the north is the Pasco County Solid Waste Resource Recovery Facility. To the southeast is Seminole’s Back-Up Control Center. To the south is the proposed SHCCF, the existing SHGS, and the Shady Hills Wastewater Treatment Facility. DEF’s existing 230 and 500 kV transmission lines and FGT’s natural gas transmission line abuts the western terminus of the transmission corridor.

Importantly, FLU Policy 1.4.6 entitled “Utility Compatibility” only prohibits electric transmission corridors, natural gas pipeline easements, and similar facilities from being located “through or immediately adjacent to” existing neighborhoods. The fact that the surrounding uses are utility in nature and not existing neighborhoods conforms with the requirements of FLU Policy 1.4.6. That conformance and the fact that the corridor lacks sensitive lands and areas of special concern that are addressed in the comprehensive plan demonstrates consistency with the County’s FLU policies and overall comprehensive plan.

FLU Policy 1.10.1 identifies the County’s intent to review proposed uses for their compatibility and appropriate timing pertaining to the intended use and location. This review is typically conducted through the special exception zoning application process and considers the existing uses and the potential changes to the existing densities and intensities, the changes to development patterns in the area, the anticipated transitions between land uses, the potential changes to environmental, cultural features, and community character, and the timing of available public facilities/services associated with change in uses. Similar to the SHCCF Project, the existing surrounding uses have each been reviewed under similar processes and have demonstrated compliance with the intent of these provisions.

Zoning

The location of the transmission corridor is consistent with the Pasco County Land Development Code. The County’s Zoning map identifies the transmission corridor within Agricultural (A-C) zoning district (Figure 16).

Biological Resources

Characteristic vegetative communities were classified utilizing the FLUCFCS Level III (FDOT, 1999) data from the SWFWMD that were updated based on a field reconnaissance conducted in January 2018.

Species-Environmental Relationships

The following subsections include descriptions of flora and fauna within the 230-kV tie-line corridor and surrounding area. This discussion includes information related to the species found and the value of the habitats present, by FLUCFCS Level III codes.

Mixed Hardwood-Conifer (FLUCFCS 434) - Approximately 2.9 acres within the eastern portion of the 13.7-acre transmission corridor consists of mixed hardwood-conifer habitat (Figure 8). The canopy is dominated by live oak, laurel oak, and slash pine, with nearly no understory or groundcover vegetation present. The sparse groundcover vegetation present consists chiefly of saplings of the canopy species present along with vine species such as grapevine and catbrier (*Smilax* sp.). Extensive hog rooting was observed in this habitat during the January 2018 field reconnaissance.

Utilities (FLUCFCS 830) - Approximately 10.4 acres of the 13.7 acres transmission corridor has a “utilities” land use classification (Figure 8). This area consists chiefly of two dry detention basins with a small portion of it consisting of a vehicle weigh station and access driveway. Vegetation within the dry detention basins is dominated by herbaceous groundcover species along with scattered canopy species. Canopy species present consist of laurel oak, live oak, slash pine, and American sycamore (*Platanus occidentalis*). Herbaceous groundcover vegetation present in this area consists of a variety of ruderal native and non-native invasive/exotic species such as bahia grass, beggar ticks, hairy indigo (*Indigofera hirsuta*), sandbur (*Cenchrus* sp.), dogfennel, cogon grass, common ragweed (*Ambrosia artemisiifolia*), bluestem (*Andropogon virginicus*), Spanish bayonet (*Yucca aloifolia*), and prickly pear cactus.

Vegetative Communities Adjacent to the Transmission Corridor

The surrounding area is dominated by existing utility and energy infrastructure uses, although parcels of xeric upland forest occur directly adjacent to the north and east of the transmission corridor. The surrounding vicinity is dominated by a variety of utility and industrial uses. Residential land uses (Figure 8) are limited to areas west of Pasco County’s Shady Hills Wastewater Treatment Plant, additional vacant County-owned property and Duke Energy Florida’s 230 and 500 KV transmission system.

Terrestrial Ecology Systems - Fauna

The disturbed nature and existing use of the transmission corridor as dry detention basins provides poor quality wildlife habitat for use by avian species and herpetofauna which are common in disturbed upland fields and mixed hardwood-conifer habitat in central Florida.

Mixed Hardwood-Conifer and Utilities (FLUCFCS 434 and 830) – Although these upland habitats have been historically altered and do not provide quality native wildlife habitat, they are occasionally used by common resident and migratory non-listed avian species such as blue jay, northern cardinal, Carolina wren, Carolina chickadee, tufted titmouse, Eastern bluebird (*Sialia sialis*), blue-gray gnatcatcher, ruby-crowned kinglet (*Regulus calendula*), palm warbler (*Setophaga palmarum*), pine warbler, black-and-white warbler, yellow-throated warbler, yellow-rumped warbler (*Setophaga coronata*), nanday parakeet (*Aratinga nenday*), red-bellied woodpecker, and downy woodpecker, as well as common mammals such as nine-banded armadillo and feral hog (*Sus scrofa*).

Aquatic Ecology Systems – Fauna

No aquatic systems exist within the transmission corridor. Therefore, no aquatic or wetland dependent fauna were observed within this area.

Threatened and Endangered Species – Flora and Fauna

Only one state-listed species was observed during the field reconnaissance, i.e., the gopher tortoise. This species is common to the area and uses other upland habitats that are found throughout the surrounding region.

USFWS has previously evaluated the potential for the construction of the transmission line to impact federally-listed species. At the time of the PPSA siting process in 2018, USFWS reviewed an evaluation prepared on behalf of SHEC that included a field and desktop habitat, listed species survey, and database review to evaluate the potential for the occurrence of listed species in the Project area (including the SHCCF site, transmission corridor and laydown area). The Service concluded that the Project is not expected to result in take of listed species. See Appendix B-4. In 2019, USFWS reviewed a follow-up report addressing an expansion of a portion of the transmission corridor and again concluded that the use of the tie-line expansion is not likely to result in take of listed species. As a result

of more recent design activities, most of the transmission line expansion area reviewed in 2019 will not in fact be impacted by Seminole's construction of the transmission line.

Plant and Animal Surveys

A field reconnaissance was combined with the evaluation of habitat conditions to determine the presence or absence of threatened and endangered species in the tie-line corridor.

The potential for utilization of the transmission corridor by most terrestrial listed species for foraging, roosting, or breeding is limited due to the alteration of the upland habitats present, as well as the surrounding utility and industrial development. Based on the list of threatened and endangered species known to occur in Pasco County, reported occurrences from the FNAI database review, and the available habitats within the transmission corridor and surrounding area, federally and state-listed species that were observed or may potentially occur within the area were identified and are discussed below.

Flora - The FNAI database review indicated one reported occurrences of listed plant species within 5 miles of the tie-line corridor, i.e., pond spice. No listed plant species were observed within the transmission corridor during a field reconnaissance in January 2018. Furthermore, due to the lack of suitable upland and wetland habitats and significant alteration of the upland habitats present, it is not likely any listed plant species potentially occurring within Pasco County are present within the transmission corridor. Based on the Pasco County list of threatened and endangered species and the available habitats within the transmission corridor, federally and state-listed species that were identified from the FNAI database review as occurring within 5 miles of the transmission corridor or are likely to occur within the transmission corridor were identified and are discussed below.

Pondspice (E) - Pondspice is classified as endangered in the State of Florida but is not listed by the USFWS. It is a shrub which is found in wetland habitats such as cypress domes, freshwater ponds, and shrub marshes in pine flatwoods, and along the edges of baygalls (FNAI, 2001). No individuals were observed in the transmission corridor during the field reconnaissance, and since there are no wetlands located within the transmission corridor, there is no likelihood of occurrence within the transmission corridor.

Fauna - The FNAI database review indicated occurrences of four listed animal species in the vicinity of the transmission corridor – Southeastern American kestrel, Florida pine snake, short-tailed snake, and gopher tortoise.

The only listed species observations within the transmission corridor during the field reconnaissance were burrows of the state-listed gopher tortoise. Additional species that were not observed but have a moderate probability of occurrence within the transmission corridor based on the presence of suitable habitat include the eastern indigo snake (*Drymarchon corais couperi*), Florida pine snake, and short-tailed snake. A brief description of each species observed, identified from the FNAI database review as occurring within 5 miles of the transmission corridor, or with a moderate probability to occur within the transmission corridor is provided below.

Gopher Tortoise (T) – The gopher tortoise is classified as threatened by the FWC but is not listed federally by the USFWS in Florida. The gopher tortoise is a large terrestrial turtle that primarily forages on herbs and forbs. Its carapace is a dark brown or grayish brown color, while the plastron is much lighter in color, typically yellow or somewhat tan. Gopher tortoises have stumpy, elephant-like hind feet and flattened, shovel-like forelimbs that are used for digging burrows (FWC, 2017). The gopher tortoise excavates burrows with these forelimbs for shelter from temperature extremes, predators, and refuge from fires. Burrows are excavated in well-drained, sandy soils typically associated with upland habitats such as palmetto prairies, dry pine flatwoods, turkey oak sandhills, and xeric scrub throughout peninsular Florida. The gopher tortoise will also excavate burrows in disturbed habitats such as pastures

and old fields (FNAI, 2001). It is considered a keystone species as hundreds of commensal species, such as the listed eastern indigo snake and Florida pine snake, have been documented to utilize gopher tortoise burrows for their own survival needs. During the field reconnaissance of the transmission corridor, several gopher tortoise burrows were observed within areas classified as Utilities (FLUCFCS 830). Potential habitat for the species exists throughout the transmission corridor, as well as directly adjacent to the southwest and east of it.

Eastern Indigo Snake (T) – The eastern indigo snake is classified as threatened by both the FWC and USFWS. The eastern indigo snake is a non-venomous, bluish-black colored snake that can reach lengths of eight feet. Its chin, cheek, and throat are mostly red or brown, but can also be white or black. Most indigo snakes have smooth scales, although adults do have keels (ridges) on the front of some of their scales (FNAI, 2001). Eastern indigo snakes inhabit pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. They can be found throughout Peninsular Florida (FWC, 2017). This species occasionally utilizes gopher tortoise burrows as refugia, especially during the winter months in the northern portion of the state where colder temperatures are more prevalent. Although no individuals or signs of their presence were observed during the field reconnaissance of the transmission corridor, potential refugia in the form of gopher tortoise burrows were observed, and adjacent areas to the north and east of the transmission corridor may provide suitable habitat. The transmission line will be constructed so as to avoid gopher tortoise burrows (and thus also avoid eastern indigo snakes as well in the event they may occasionally utilize gopher tortoise burrows as refugia) to the maximum extent practicable.

Florida Pine Snake (T) – The Florida pine snake is classified as threatened by the FWC but is not listed federally by the USFWS. The Florida pine snake is a large, non-venomous snake which can be found throughout most of the panhandle and peninsular Florida. It has a brown back with dark blotches, white belly, ridged scales, small head, and pointed snout (FNAI, 2001). It prefers open xeric habitats with well-drained, sandy soils such as longleaf pine-turkey oak sandhill, sand pine scrub, and scrubby flatwoods. Similar to the eastern indigo snake, they are known commensal species of gopher tortoise burrows. The FNAI database review indicated one reported occurrence of the species within 5 miles of the transmission corridor. Although no individuals or signs of their presence were observed during the field reconnaissance, potential refugia in the form of gopher tortoise burrows were observed, and adjacent areas to the east of the transmission corridor may provide suitable habitat.

Short-tailed snake (T) – The short-tailed snake is classified as threatened by the FWC but is not listed federally by the USFWS. It is a small, non-venomous snake which is endemic to Florida. The species is cryptic and fossorial in nature. It can be found mainly from the north central to central portion of peninsular Florida. It prefers xeric habitats such as longleaf pine flatwoods, turkey oak sandhills, and scrubby oak communities (FWC, 2017). The FNAI database review indicated one reported occurrence of the species within 1.5 miles of the transmission corridor. No individuals or signs of their presence were observed during a field reconnaissance. The mixed hardwood-conifer (FLUCFCS 434) habitat in the northeastern portion of the transmission corridor may provide suitable habitat for the species, but the likelihood of its presence is low to moderate due to the extensive hog rooting and human alteration to this community. Suitable habitat for the species may exist in adjacent areas to the east of the transmission corridor.

Southeastern American Kestrel (T) – The Southeastern American kestrel is classified as threatened by the FWC but is not listed federally by the USFWS. The Southeastern American kestrel is a small raptor which preys upon insects, small mammals, and small birds. It prefers to nest in open fields and woodlands and pine savannah habitats with large, dead trees containing excavated cavities (FWC, 2017). The FNAI database review indicated one reported occurrence of the species within 1/4 mile of the transmission corridor (See Figure 17). However, since the

transmission corridor lacks large dead trees with cavities suitable for nesting by the species, nesting habitat is not present at the transmission corridor. Therefore, the likelihood of it occurring at the transmission corridor is low.

Cultural Resources and Historic Properties

The location of the proposed 230-kV interconnection tie-line has been previously evaluated for cultural resources and archaeological significance. The 230-kV interconnection tie-line corridor was assessed by the Florida Department of State, Division of Historical Resources in 1986. The location of the proposed 230-kV interconnection tie-line is owned by Pasco County and has been previously evaluated for cultural resources and archaeological significance associated with the Pasco County's Shady Hills Wastewater Treatment Facility, located to the west, and the Pasco County Solid Waste Resource Recovery Facility, located to the north, of the Site. The DHR required a Phase I Cultural Resource Assessment Survey (CRAS) of the Project interconnection tie-line and tie-line extension. The findings of the CRAS determined the proposed Project would have no adverse effects on cultural resources. The DHR concurred in letters issued on June 7, 2018 and April 3, 2019, respectively (See Appendix F).

If any cultural resources are discovered during construction, construction activities will be immediately halted in the vicinity and the DHR will be notified. A determination of the significance of the find will be conducted, as appropriate, and SHEC will coordinate with DHR to evaluate mitigative measures necessary to protect the area from adverse impacts if necessary.

Aesthetics

Construction of the transmission line will add several monopoles as well as transmission wires to an area that is currently largely vacant. However, the corridor will be encircled by utility-type uses, including the Pasco County Solid Waste Resource Recovery Facility to the north, Seminole's Back-Up Control Center to the southeast, and the SHCCF, the existing SHGS, and the Shady Hills Wastewater Treatment Facility to the south. DEF's existing 230 and 500 kV transmission lines and FGT's natural gas transmission line abuts the western terminus of the transmission corridor. As a result, the transmission line will be compatible with surrounding uses and will not adversely affect the aesthetics of the area.

Socioeconomics and Community Resources

The transmission line itself will have no impact on communities in the area.

Noise

The audible noise associated with a transmission line is generated by either corona from the conductors or from gap-type discharges. Gap noise is typically due to faulty or failed hardware and easily corrected. Corona is a phenomenon that occurs when there is an irregularity on the surface of the conductor, such as buildup from fog, water droplets, or significant particulate matter. Corona activity at the surface of the conductors produces a low-level audible noise that is a slight humming sound. Under wet conditions, higher audible noise levels are experienced than will occur under dry conditions. However, background noise from various sources (inclement weather, traffic, agricultural activity, etc.) has the effect of masking transmission line noise.

Audible noise calculations were performed for the typical transmission line cross-section using corona field effects software produced by the Bonneville Power Administration (BPA), U.S. Department of Energy. This software provides estimated median (L50) noise levels for fair and rainy weather as a function of distance from the edge of right-of-way for the modeled transmission line configurations.

During fair weather and under normal operating conditions, the audible noise levels calculated for the DR transmission line designs will be less than the ambient outdoor noise levels. For a small portion of time, when the conductors are wet from rainfall or heavy fog, the transmission line noise will increase.

Human Health and Safety

The transmission line facilities are designed to comply with all applicable codes, guidelines, and standards. The primary code used in the design of transmission lines is the NESC, 2012 edition. The NESC is an American National Standards Institute standard that covers electrical clearances and loading and strength requirements, including extreme wind. Codes and standards of other agencies and standards organizations that provide rules, guidelines, and conditions for particulars not specified by the NESC, were used to design the DR transmission line and include:

5.0 CUMULATIVE EFFECTS

The following section provides a summary by resource of the anticipated cumulative effect of the Project (including the transmission tie-line discussed in Section 4.0) and other past and present projects in the vicinity of the Project site. Pasco County has identified the projects that that have been planned and are reasonably certain to occur within one mile of the Project site (See Table 5.1-1 and Figure 18). In order to provide a more conservative analysis for some categories of impacts, Table 5.1-1 also lists projects that are expected to occur within 2.5 miles of the Project site.

Table 5.1-1: Projects Identified within 1-, 2-, and 2.5 miles of SHCCF

<p>Projects located within 1 mile:</p> <ul style="list-style-type: none"> • Hudson Avenue Batch Plant – light industry • Softwind Lane Building – industrial building • North Pasco Corporate Center – commercial building • Pasco County Resource Recovery Administration Building – administrative office • Crela Estates Townhome Project – residential • Duke substation (to be located to the west of the transmission corridor)
<p>Projects located within 2 miles:</p> <ul style="list-style-type: none"> • Pasco County Fire and Rescue Station 20 – commercial building • Sullivan Storage –commercial buildings
<p>Projects located within 2.5 miles:</p> <ul style="list-style-type: none"> • UHaul Suncoast - commercial building • Jallo Express Wash – commercial/carwash • Heartland Dental – commercial building

5.1 Air Quality

The Preferred Alternative

An air quality impact analysis was performed as part of the PSD air construction permit application in February 2018 and FDEP authorized the PSD permit in July 2018. The air quality impact analysis was updated in the PSD air construction permit application submitted in March 2021 to extend the original PSD permit. The results of the air quality impact analysis were validated again in September 2022 when a new permit extension request was

submitted to FDEP. As part of the air quality analysis, air dispersion modeling was performed to predict maximum ambient air impacts that could be generated due to operation of the Project's air emissions sources. It was determined that the Project's maximum impacts are below the significant impact levels established by EPA and therefore, a cumulative source impact analysis including existing air emissions sources in the area near the Project was not required (See Appendices B-2 and B-3).

In the technical determination document for the PSD permit, the Department concluded that:

“Based on the results presented in the air quality impact analysis, the Department has reasonable assurance that the increased pollutant emissions associated with the Project will not cause or significantly contribute to any violation of a NAAQS or PSD increment; in addition, the Department finds that there will be no adverse impact on soils, vegetation, wildlife, or AQRVs in Class I areas.”

The initial PSD air construction permit No. 1010524-001-AC / Facility ID # 1010524 was originally issued on July 27, 2018. The most recent PSD permit which extended the expiration date was issued on February 15, 2023, and is available on the FDEP website.

The proposed Project will be located in an industrial area within 500 m of the existing Shady Hills Energy Center and the Pasco County Resource Recovery Center. Both are Title V major sources of air pollutants. However, because the Project was determined to be insignificant in its ability to cause or contribute to any violations of a NAAQS, a cumulative ambient air quality analysis was not required to be performed as part of the PSD air construction permit application according to US EPA and FDEP requirements. It is therefore reasonable to expect that the proposed Project will not significantly impact the existing air quality in the area. The future projects identified in the near vicinity include one residential project and one batch plant. The residential air pollution sources such as vacuum cleaners, washers, dryers, small generators are small compared to industrial sources and are categorically exempt from air permitting requirements. The proposed batch plant has no air permits according to the FDEP permits database and therefore, assumed to be exempt from air permitting based on generic facility-based exemption due to the facility-wide emissions below the air permitting thresholds. Accordingly, the SHCCF and these anticipated projects are not expected to result in emissions that will cumulatively have a significant impact on air quality in the area.

The Project will emit GHGs that are expected to contribute to the local and regional GHG emissions levels. However, as discussed in Section 3.1.5, the proposed Project is expected to facilitate decreased reliance on coal-fired power generation, which will significantly offset the GHG emissions from the SHCCF.

No Build Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.2 Land Use

The Preferred Alternative

The SHCCF Project will be located on land that is designated Major Public/Semi-Public future land use designation (P/SP). The P/SP designation is also present to the north, east and west of the Project with Heavy Industrial designated to the south. The SHCCF Project will consist of the construction and operation of the SHCCF within approximately 14 acres, adjacent to and east of the SHGS. Pasco County has determined that the SHCCF Project is consistent with the County's existing land use plans and its Comprehensive Plan, which addresses future land

use patterns for the planning period. There will be no impacts to local or regional scenic, cultural, or natural landmarks during construction or operation of the SHCCF Project. As a result, the Project is not expected to result in significant cumulative adverse impacts on land use.

Approximately 25 acres to the east of the Site will be temporarily used for construction parking, laydown, staging, and equipment storage (See Figure 1). The area will be the site of temporary roadways, material and equipment laydown, parking and office trailers and sanitary facilities. Installation of these facilities may require the removal of unsuitable soils, with clean fill added, and the surface area will be stabilized with rock, limestone, and shell. Other areas within the construction laydown area may only be seeded or sodded with grass to prevent. Because this use will be temporary and on land designated P/SP, it will not result in significant cumulative adverse impacts on land use.

All of the future projects expected to be constructed in the vicinity of the Project will be subject to the Pasco County Land Development Code and site plan approval process. This planning process will ensure that, like the SHCCF Project, the other projects are consistent with the County's Comprehensive Plan and will not result in significant adverse effects on land use in the Project area.

No Build Alternative

Under a "no build" scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.3 Biological Resources

The Preferred Alternative

There are no wetlands or aquatic systems located on the SHCCF site, the tie-line corridor or temporary parking and construction laydown areas. No impacts to wetlands, aquatic species or ecosystems are expected. Therefore, the Project will not contribute to any cumulative impacts to these resources.

Neither the SHCCF Site nor the temporary construction parking and laydown area provide significant wildlife habitat, and no adverse impacts to ecological resources or terrestrial systems are anticipated from construction and operation of the SHCCF. Due to the previously disturbed nature of these areas, no change in floral or fauna populations are anticipated. As a result, the Project is not expected to contribute to any significant cumulative adverse impacts to ecological resources or terrestrial ecosystems.

Evidence of gopher tortoises was observed on the SHCCF Site. All gopher tortoises (and commensal species) will be identified and relocated as outlined in the FWC Gopher Tortoise Permitting Guidelines. No long-term effects on the Gopher Tortoise population are expected to occur from the SHCCF Project and the Project is not expected to impact regional populations of any other endangered or threatened wildlife or plant species. As a result, the Project is not expected to contribute to any significant cumulative adverse impacts to listed species.

Impacts on terrestrial and species associated with transmission line right-of-way preparation and construction depend primarily on the location of the selected right-of-way and the clearing and construction techniques. Based on recent project design activity, Seminole will avoid gopher tortoise burrows to the maximum extent practicable in constructing the transmission line. Moreover, the 230-kV tie-line corridor is located on land which has already been altered for and is currently used primarily as dry detention basins. As a result, it is not anticipated that transmission line construction or maintenance will have any significant impact on native vegetation or wildlife and will not contribute to cumulative effects on vegetation, wildlife, and aquatic life in the area.

The projects identified in Table 5.1-1 will be subject to the requirements of the Pasco County Land Development Code related to protection of protected species, including the need for a preliminary habitat study in appropriate cases. In addition, the projects will be subject to the requirements of the Florida Fish and Wildlife Commission regarding protection of gopher tortoises, including provisions related to avoidance of gopher tortoise burrows as well as excavation of burrows and relocation of gopher tortoises where appropriate. As a result, significant cumulative impacts to biological resources are not expected to occur.

No Build Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.4 Water Resources

The Preferred Alternative

The project will not impact surface or groundwater supplies. The primary water source for cooling, process, and irrigation will be reclaimed water from Pasco County’s SHWWTF and the interconnected PCMRS. The use of reclaimed water for cooling, process, and irrigation eliminates impacts to groundwater supplies from operation of the SHCCF. Surface water and groundwater will not be used and therefore, the project will not cause adverse hydrologic changes in water quality or quantity and will not impact drinking water sources in the vicinity of the Project site.

Domestic sanitary wastewater flows will be discharged to the local sanitary sewer. Potable water will be obtained from the County’s potable water system.

All produced wastewater streams will be internally recycled through the ZLD system including: blowdown from the evaporative cooler and HRSG; wastewater from the process wastewater treatment system; wastewater from the makeup demineralizer system; and water collected in plant and equipment drains after treatment in an oil/water separator. Solids will be concentrated and removed from the wastewater using ultra-filtration, RO systems, electro-deionization, and a brine concentrator and crystallizer. With the use of this system there will be no discharge to surface or ground waters.

The SHCCF Project stormwater management system (SWMS) is designed based on a 100-yr, 24-hr storm event. Surface runoff from the SHCCF Project is estimated to be zero to 6 inches per year to the onsite surface water management system. The SWMS has been designed to provide 8.0 acre-feet of storage from the total contributing area of approximately 14 acres. The drainage plan has been delineated into eight drainage sub-basins, and sub-basin runoff is collected within swales, drop inlets and pipe and routed to one of two ponds. Due to the use of the two stormwater ponds and the high percolation rates at SHCCF, no discharge to surface waters during operation is anticipated. A comprehensive stormwater pollution prevention plan will be prepared and implemented during construction, as required under the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

In light of the above, the Project is not expected to contribute to any adverse cumulative impacts on water resources.

The projects identified in Table 5.1-1 are not of the type that would be expected to have significant impacts on water resources. All of the projects would be subject to the Pasco County planning review process, which includes consideration of impacts to wetlands and other water resources as well as stormwater management. If any of the projects will result in discharges of dredged or fill material to waters of the United States, authorization would be

required from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act. As a result, significant cumulative impacts to water resources are not expected.

No Build Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.5 Cultural Resources

The Preferred Alternative

Phase I CRAS reports have been completed for the SHCCF Project site, the interconnection tie-line and the temporary construction parking and laydown area. Based on these surveys, the applicant’s archeological consultant concluded there will be no adverse impacts to properties listed or eligible for listing in the National Register of Historic Places (NRHP). The Division of Historical Resources has reviewed the CRAS reports and concurred with the conclusion that the Project will not have any adverse impacts to cultural resources. As a result, the Project is not expected to contribute to any cumulative adverse impacts to cultural resources.

Any impacts on cultural resources associated with the construction of the projects identified in Table 5.1-1 would be limited to the cultural resources on those project sites. The development of those projects would be subject to the provisions of the Pasco County Land Development Code related to the protection of cultural resources, which require avoidance, minimization and mitigation of any impacts to cultural resources. As a result, measures would be in place to ensure that any impacts to cultural resources associated with these projects are minimized and that any impacts are not cumulatively significant.

If any cultural resource finds are discovered during construction of any of these projects, construction activities will be immediately halted in the vicinity and the DHR will be notified. A determination of the significance of the find will be conducted, as appropriate, and the developer will coordinate with DHR to evaluate mitigative measures necessary to protect the area from adverse impacts.

No Build Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.6 Aesthetics

The Preferred Alternative

The Project site is currently predominately vacant. The area adjacent to the Project site is developed with industrial/utility uses to the north, south, and west. The area to the east is land that is predominantly vacant, privately owned and planned for electric utility use. The Project will not result in adverse visual interruptions or obstructions in the adjacent areas or locations that are outside of the immediate area. As a result, the Project is not expected to contribute to any cumulative adverse impacts to aesthetics.

No Build Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.7 Socioeconomics and Community Resources

The Preferred Alternative

The SHCCF Project is expected to result in positive impacts for Pasco County and the surrounding area through economic output, employment opportunities and community growth. During construction, direct and indirect economic benefits will include construction jobs, purchase and rental of equipment and materials, housing and living expenses for workers, and indirect employment that will be needed to accommodate the temporary influx of workers to the area. The size of the housing market in Pasco County is large enough to accommodate the projected construction workforce without affecting rental rates. The operation of the SHCCF will have both direct and indirect economic benefits, including capital expenditures, operation and maintenance expenditures, employment, and ad valorem property tax revenues. Given the location/distance of the Hispanic/Latino community and the lack of adverse impacts from plant construction and operation, no adverse disproportionate impact on the Hispanic/Latino community is anticipated. Therefore, the Project is not expected to contribute to any significant cumulative adverse impacts to environmental justice communities. Given the lack of any economically-disadvantaged communities with a one-mile radius of the Project site, consideration of future projects within that area would not change the conclusion regarding the lack of significant cumulative adverse impact.

No Build Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.8 Noise

The Preferred Alternative

The SHCCF project is located in a utility and industrial area of Pasco County. There are no residential zoned parcels adjoining or within the immediate vicinity of the SHCCF project; the nearest residential parcels are 0.5 miles away. Like the Project, all future projects in the area would be required to comply with the requirements of the Pasco County noise ordinance, including restrictions on noise generated from industrial or commercial operations that may impact adjoining residential districts. The Project is not expected to contribute to any significant cumulative adverse noise impacts to residential areas or other sensitive receptors.

No Action Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.9 Transportation

The Preferred Alternative

Traffic management practices will be implemented during the peak AM and PM hours to facilitate ingress and egress to maintain acceptable Level of Service for access during peak construction. The operational workforce for the SHCCF is not anticipated to significantly increase traffic, and no adverse impacts to traffic are anticipated during operation.

The other projects anticipated to occur in the Project area will likewise generate short-term construction-related traffic as well as longer term traffic associated with their operations. All projects will be subject to the County planning review process, which will include consideration of local traffic impacts. All projects will likewise have to abide by Florida Department of Transportation requirements, which will help insure that there are no significant impacts to

the state highway system. In light of this, the Project is not expected to contribute to any significant cumulative adverse impacts on transportation in the area of the Project Site.

No Action Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

5.10 Human Health and Safety

The Preferred Alternative

There are no human health and safety concerns associated with the project. Noise levels during construction are expected to be short in duration and not near levels that would affect the health or wellbeing of humans at offsite receptors. Induced currents from EMF produced by the transmission interconnection tie-line are limited to FDEP requirements for electric and magnetic field magnitudes on the right-of-way and at the edge of the right-of-way.

Construction activities will typically take place during daylight hours. Special circumstances could require nighttime activities. No inconvenience will be experienced by residents or other populations as a result of the location, construction, operation or maintenance of the interconnection tie-line. The corridor is located on property that is used for a resource recovery facility and wastewater treatment plant. No public ROW is crossed by the corridor. Noise from machinery used intermittently at various locations along the right-of-way during construction and possible minor traffic disruptions along the driveway due to use of equipment along roads and material deliveries will occur but effects on occupants of the county property will be minor. The construction and associated noise-producing activities are intermittent.

In general, because of the temporary nature of the construction activities and the relatively short duration of the construction process at any given location, potential impacts experienced by the human populations working adjacent to the transmission line corridor are anticipated to be minor and will not contribute to significant adverse cumulative impacts.

SHCCF may periodically generate hazardous waste (typically less than 100 kilograms (kg) per month), including spent solvents, boiler chemical cleaning wastes and other wastes. Hazardous wastes, if any, will be collected onsite and disposed offsite of by a licensed hazardous waste contractor.

Solid wastes, such as operational, maintenance, and municipal waste, will be generated in small amounts. The zero liquid discharge (ZLD) system will produce the bulk of the waste associated with operation. All non-hazardous solid waste will be collected and transported off-site by private licensed waste collection companies for disposal at a permitted facility.

The Pasco County Order approving the Special Exception includes a determination that the proposed power plant and transmission line “is consistent with the adopted Pasco County Comprehensive Plan and would not have an adverse effect on the health, safety and welfare of the public.” Consistent with this determination and given the de minimis impacts to human health and safety associated with the Project, the Project is not expected to contribute to any cumulative adverse impacts to public health and safety. Consideration of future projects expected to occur in the area – mostly commercial and residential projects – does not change that conclusion.

No Action Alternative

Under a “no build” scenario, there would be no cumulative impacts associated with the construction and operations of the SHCCF.

6.0 SUMMARY OF MITIGATION

The FDEP coordinated the review and impact assessment of the SHCCF Project with several state, regional and local agencies. The approval of the SHCCF in accordance with the Conditions of Certification (See Appendix A) acknowledged a reasonable balance between the need for the Shady Hills Energy Center (SHEC) and minimal impacts on air and water quality, fish and wildlife, water resources and other natural resources of the State.

The 230-kV interconnection transmission tie-line is subject to the State's electric and magnetic field rules pursuant to Chapter 62-814, F.A.C. SHEC submitted the required compliance reports for the proposed tie-line and the reports demonstrated compliance with the rule. If there are any deviations from the proposed interconnection configuration submitted in the Application, SHEC will be required to submit a revised compliance report, 90 days prior to construction of the tie-line, as required in Section 62-814.520(3), F.A.C.

The FDEP approved the SHCCF Project with conditions regarding construction and operation of the proposed facilities that are described below, along with other mitigation measures to be implemented by SHEC.

6.1 Air Quality

The final air construction permit – (Permit Number 1010524-001-AC / Facility ID # 1010524), was originally issued on July 27, 2018 and reissued on February 15, 2023, and is available on the following website: <https://fldep.dep.state.fl.us/air/emission/apds/default.asp>.

As part of the PSD air construction permit application, a BACT analysis was performed for the Project, which represents an emission limitation that ensures the highest achievable reduction in emissions, taking into account the project's specific economic, environmental, and energy impacts as well as the feasibility of employing various technologies. Air construction permit No. 1010524-004-AC/PSD-FL-444A requires installation of the following control systems and work practice standards to achieve the emissions standards established as BACT:

- Dry-low NO_x combustors and selective catalytic reduction for NO_x emissions from the CTG
- Combustion design and good operating practices for CO and VOC emissions from the CTG
- Use of natural gas fuel for PM/PM₁₀/PM_{2.5} and SO₂ emissions from the CTG
- For the auxiliary boiler, use of low-NO_x burners for NO_x emissions, good combustion practices for CO and VOC emissions, and use of natural gas fuel for SO₂ emissions
- Use of good combustion practices and ultra low-sulfur diesel fuel for emissions from the emergency generator and fire pump
- Use of high efficiency drift eliminator for the cooling tower

For GHGs, energy efficiency was determined to be the BACT. In fact, the Project is limited to 875 lb of CO₂e per MW-hr of electricity output, which is considered to be one of the lowest for natural gas-fired combined cycle power plants.

Reasonable precautions pursuant to FDEP Rule 62-296.320(4)(c)3, F.A.C., will be used to minimize fugitive particulate emissions during the construction phase of the project. These precautions include use of high moisture content material, watering and use of chemical dust suppressants on unpaved surfaces, and watering/sweeping of paved road surfaces as necessary. Non-road engines with EPA Tier 3 emissions certification will be used to

minimize combustion-generated pollutant emissions. For the auxiliary boiler, good combustion practices will be used to minimize emissions generated during the construction period.

6.2 Land Use

Approximately 25 acres to the east of the Site will be temporarily used for construction parking, laydown, staging, and equipment storage. The area will consist of temporary roadways, material and equipment laydown, parking and office trailers and sanitary facilities. Installation of these facilities may require the removal of unsuitable soils, with clean fill added, and the surface area will be stabilized with rock, limestone, and shell. Other areas within the construction laydown area will be seeded or sodded with grass to prevent erosion.

A Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented to minimize erosion and sedimentation during storm events. Best management practices (BMPs) will be developed and implemented to minimize spills on-site. Maintenance and refueling activities will be performed only in designated areas. Any spills will be cleaned up and wastes will be disposed of in accordance with applicable requirements.

6.3 Biological Resources

Neither the SHCCF Site nor the temporary construction parking and laydown area provide significant wildlife habitat, and no adverse impacts to ecological resources or terrestrial systems are anticipated from construction and operation of the SHCCF. Due to the previously disturbed nature of these areas, no change in floral or fauna populations are anticipated. The SHCCF Site, tie-line corridor or temporary construction parking and laydown areas do not contain preferred habitat for nesting, roosting, or foraging by state-listed wildlife species, however, evidence of gopher tortoises have been observed on the SHCCF Site.

In accordance with the FDEP Conditions of Certification, the FWC requires SHEC to conduct a 100 percent survey for gopher tortoises (*Gopherus polyphemus*), in accordance with the FWC-approved Gopher Tortoise Management Plan and the FWC-approved Gopher Tortoise Permitting Guidelines. The survey must effectively locate and mark all potentially occupied tortoise burrows and SHEC must provide the FWC a detailed gopher tortoise relocation plan in accordance with the Gopher Tortoise Management Plan and Gopher Tortoise Permitting Guidelines. The information must include details on the location for on-site recipient areas and any off-site FWC-approved temporary contiguous habitat, as well as appropriate mitigation contributions per tortoise, as outlined in the Gopher Tortoise Permitting Guidelines. Additionally, the Gopher Tortoise Permitting Guidelines specify that any commensal species observed during the burrow excavations that are listed by the FWC shall be relocated in accordance with the applicable guidelines for that species. Additionally, as recommended by the USFWS, SHEC will notify the USFWS 30 days prior to any clearing/land alteration activities to confirm that the Eastern Indigo Snake Standard Protection Measures will be implemented.

6.4 Water Resources

Surface water and groundwater will not be used and therefore, the project will not cause adverse hydrologic changes in water quality or quantity and will not impact drinking water sources in the vicinity of the project site. The use of reclaimed water for cooling, process, and irrigation eliminates impacts to groundwater supplies from operation of the SHCCF. Potable water and service water, which includes fire water, will be supplied by the Pasco County municipal system.

All produced wastewater streams will be internally recycled through the ZLD system including: blowdown from the evaporative cooler and HRSG; wastewater from the process wastewater treatment system; wastewater from the

makeup demineralizer system; and water collected in plant and equipment drains after treatment in an oil/water separator. With the use of this system there will be no discharge to surface or ground waters.

A comprehensive stormwater pollution prevention plan will be prepared and implemented, as required under the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities. Due to the use of the two stormwater ponds and the high percolation rates at SHCCF, no discharge to surface waters during operation is anticipated.

6.5 Cultural Resources and Historic Properties

The DHR issued a letter of concurrence that there were no significant archaeological or historical resources recorded in the SHCCF Project area. Based on the location of the temporary construction parking and laydown area, preliminary findings indicated that this area may have significant archaeological or historical resources recorded with DHR and included Conditions of Certification to address this conclusion. (See Appendix B-II.6). If historical or archaeological artifacts or features are discovered at any time within the SHCCF Project Site, the DEP and DHR will be notified to determine appropriate action. Additionally, if alterations associated the reconfiguration of the Project Site are required, the DHR will be consulted to determine if additional cultural resource surveys are required.

6.6 Aesthetics

The Project will not result in adverse visual interruptions or obstructions in the adjacent areas or areas that are outside of the immediate area. Landscape and buffering plans will be developed in accordance with Pasco County LDC Section 905.2, which will include a ten-foot (10') wide vegetative buffer of trees and evergreen shrubs along the perimeter of the eastern and southern boundary of the site and a vegetative buffer along the northern boundary.

6.7 Socioeconomics and Community Justice

The SHCCF Project is expected to result in positive economic impacts for Pasco County and the surrounding area through economic output, employment opportunities, wages, and community employment growth. During construction, direct and indirect economic benefits will include construction jobs, purchase and rental of equipment and materials, housing and living expenses for workers, and indirect employment that will be needed to accommodate the influx of workers to the area. The operation of the SHCCF will have both direct and indirect economic benefits, including capital expenditures, operation and maintenance expenditures, employment, and property tax revenues.

6.8 Noise

The SHCCF project is located in an industrial area of Pasco County. There are no residential zoned parcels adjoining or within the vicinity of the SHCCF project. Although not required, the Project design includes sound attenuation measures.

6.9 Transportation

Primary access routes during construction and operation of the SHCCF include SR 52, Hays Road, Hudson Avenue, and Softwind Lane. During construction of the SHCCF, traffic management practices will be implemented during the peak AM and PM hours to facilitate ingress and egress. The contractor for the SHCCF will develop a traffic management plan to include the appropriate traffic management, as necessary, to maintain acceptable Level of Service for access during peak construction employment.

The operational workforce for the SHCCF is not anticipated to significantly increase traffic, and no adverse impacts to traffic are anticipated during operation. Changes to the existing roadway system are not required to meet SHCCF Project needs.

6.10 Human Health and Safety

Sanitary wastes from the operation of SHCCF will be discharged to Pasco County's sanitary sewer system.

All solid (non-hazardous) and hazardous wastes produced or associated with the SHCCF will be managed according to the federal, state, and local regulations. All non-hazardous solid waste will be collected and transported off-site by private licensed waste collection companies for disposal at a FDEP-permitted facility. All hazardous waste produced at the SHCCF will be collected on-site and disposed of off-site by a licensed hazardous waste contractor.

An approved commercial solid waste contractor will collect and transport the solid wastes for disposal in accordance with state regulations. Natural gas and Ultra Low Sulfur Distillate fuel are the only proposed fuels for the SHCCF; therefore, solid waste combustor ash management is not proposed for the SHCCF.

7.0 COORDINATION, CONSULTATION, AND CORRESPONDENCE

7.1 Public Outreach

The SHCCF Project was officially announced in November 2017. As part of the state site certification process, SHEC subsequently reached out to stakeholder groups including elected local officials, site neighbors, and county and state government agencies. SHEC directly noticed, via mail, approximately 6,500 landowners and residences located within a 3-mile radius of the SHCCF Site boundary, and within 0.25-mile from the 230-kV interconnection tie-line.

An application for Special Exception Use for the SHCCF Project was submitted to Pasco County in November 2017 and was approved by the Pasco County Planning Commission on September 10, 2018. Pasco County found the project consistent with applicable County ordinances, regulations, standards and criteria and granted a Special Exception Use for the project.

In addition, SHEC held public informational meetings in late spring 2018 to share detailed Project information with the local community to obtain feedback and answer questions. The mailing area associated with this meeting included an area up to 1.5 miles from the project boundary and included property owners, residents, elected/appointed governmental officials, and local non-governmental organizations. Project information provided at the informational meeting was made available to the public on a Project website, which included a Project Factsheet; a PowerPoint presentation (for stakeholder briefings); and numerous informational maps and figures.

7.2 Agency Consultation

Federal, State, regional, and local agencies were contacted by SHCCF representatives to inform the agencies about the proposed SHCCF Project and to solicit input regarding the Project. The individuals contacted are listed below.

7.2.1 Federal Agency Coordination

U.S. Fish and Wildlife Service

7.2.2 Tribal Coordination

The Miccosukee Tribe of Indians and Muscogee (Creek) Nation were contacted by email May 10, 2023 and provided electronic and hard copies by USPS mail of Cultural Resource Assessment Surveys, SHPO's review of the Surveys and high level summaries. No responses were submitted and the Section 106 consultation requirements have been met.

7.2.3 State Agency Coordination

- FDEP, Office of General Counsel
- FDEP, Siting Office
- FDEP, Southwest District Office - Tampa
- FDEP, Division of Air Resource Management - Tallahassee
- FDEP, Division of Water Resource Management - Tallahassee
- Florida Fish and Wildlife Conservation Commission
- Florida Department of State – Division of Historical Resources
- Florida Department of Transportation
- Florida Department of Economic Opportunity
- Southwest Florida Water Management District

7.2.4 Local Coordination

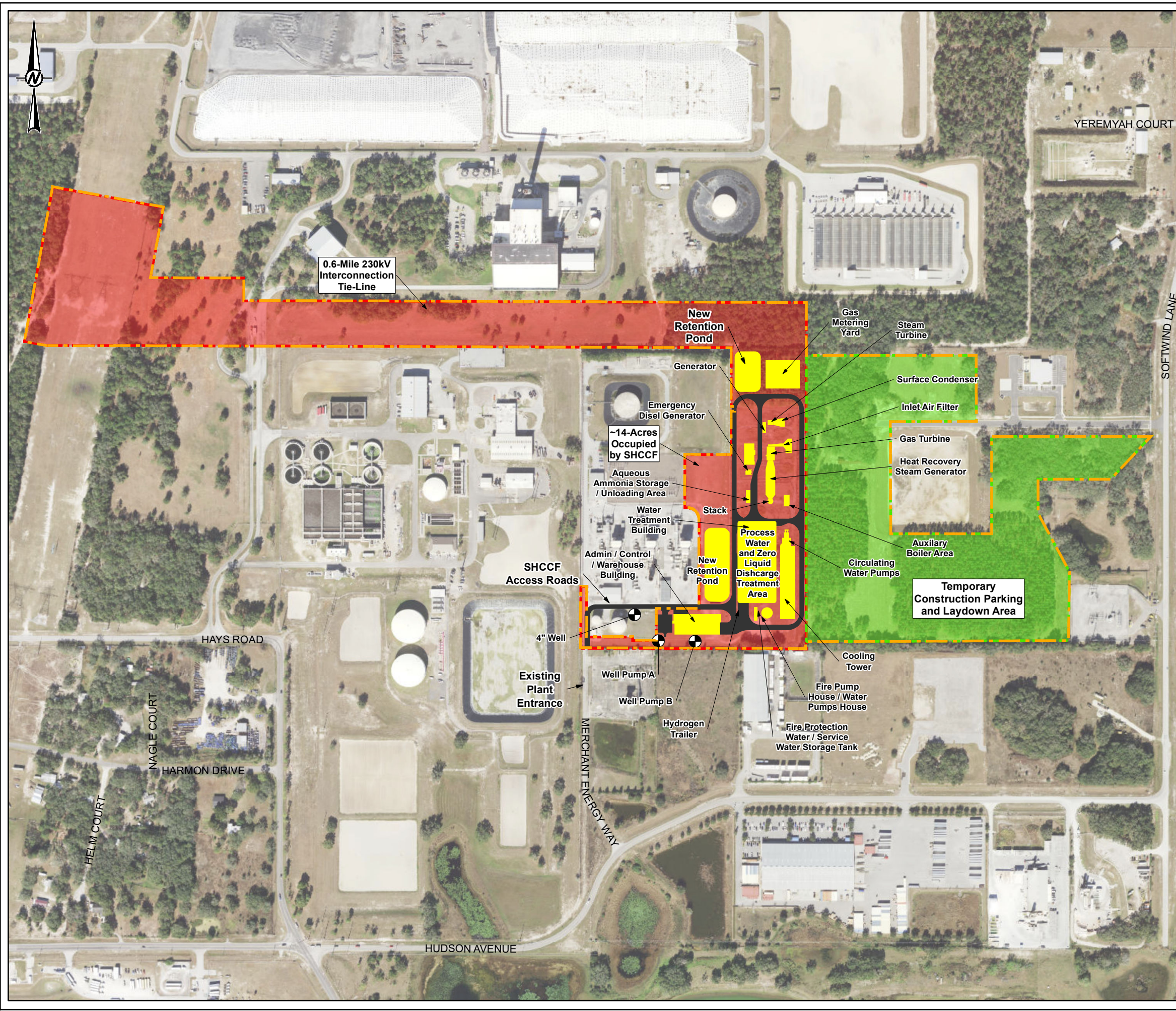
- Pasco County Planning Commission
- Pasco County Community Development, County Attorney Office, Current Planning, Development Services, Engineering Services, and Facilities Management

8.0 REFERENCES

- Florida Department of State, Division of Historical Resources, DHR Project File 2018-0289, February 8, 2018.
- Florida Department of State, Division of Historical Resources, DHR Project File 2018-B, March 13, 2018.
- Florida Department of State, Division of Historical Resources, DHR Project File 2018-C, March 13, 2018.
- Florida Department of State, Division of Historical Resources, DHR Project File 2018-G, April 12, 2018.
- Florida Department of State, Division of Historical Resources, DHR Project File 2018-I, June 7, 2018.
- Florida Department of State, Division of Historical Resources, DHR Project File 2018-J, August 27, 2018.
- Florida Department of State, Division of Historical Resources, DHR Project File 2018-L, April 3, 2019.
- Florida Fish and Wildlife Conservation Commission, 2020. Gopher Tortoise Permitting Guidelines.
- Florida Fish and Wildlife Conservation Commission, 2020. Southeastern American Kestrel Species.
- Florida Fish and Wildlife Conservation Commission, 2020. Conservation Measures and Permitting Guidelines.
- Florida Natural Areas Inventory (FNAI), 2001. Field Guide to the Rare Plants and Animals of Florida
- Florida Natural Areas Inventory (FNAI), 2023. Pasco County List.
- Phase I Cultural Resource Assessment of The Softwind BUCC Facility Parcel, Pasco County, Florida. AHC Technical Report No. 1183, March 2018.
- Phase I Cultural Resource Assessment of The Shady Hills Combined Cycle Facility Parcel Pasco County, Florida. AHC Technical Report No. 1182, April 2018.
- Phase I Cultural Resource Assessment of The Shady Hills Combined Cycle Facility Interconnection Tie-Line Parcel Pasco County, Florida. AHC Technical Report No. 1188, April 2018.
- Phase I Cultural Resource Assessment of The Shady Hills Combined Cycle Facility Interconnection Tie-Line Extension Parcel, Pasco County, Florida. AHC Technical Report No. 1214, February 2019.
- Shady Hills Energy Center, Shady Hills Combined Cycle Facility, Site Certification Application, 2018.
- Shady Hills Energy Center, Shady Hills Combined Cycle Facility, Site Certification Application, 2019.
- US Census Bureau, 2021.

DRAFT

FIGURES



- LEGEND**
- Existing Well Locations (Approximate) (Not Being Certified)
 - SHCCF Layout
 - SHCCF Major Components
 - SHCCF Access Roads
 - Temporary Construction Parking and Laydown Area (Not Being Certified)
 - Area to be Certified
 - ~14-Acres Occupied by SHCCF
 - 0.6-Mile 230kV Interconnection Tie-Line
 - SHCCF Project
 - ~14-Acres Occupied by SHCCF (To be Certified)
 - 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
 - Temporary Construction Parking and Laydown Area (Not Being Certified)



NOTE(S)
 NOT INCLUDED IN SHCCF CERTIFIED SITE:
 ONSITE NATURAL GAS METERING STATION OWNED BY FLORIDA GAS TRANSMISSION
 THREE (3) ONSITE GROUNDWATER WELLS OWNED BY SHADY HILLS GENERATING STATION

REFERENCE(S)
 EXISTING FACILITY FENCELINE, CERTIFIED SITE, SHCCF PROJECT, WSP/GOLDER ASSOCIATES INC., 2017-2023
 PARCEL BOUNDARY, PASCO COUNTY, 2017-2023
 SHCCF MAJOR COMPONENTS, POWER ENGINEERS, 2017

SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 SHCCF PROJECT SITE PLAN

CONSULTANT	DATE	REVISION
	YYYY-MM-DD	2023-05-09
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	MM
	APPROVED	MM

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Proposed Shady Hills Combined Cycle Facility

Existing Shady Hills
Generating Station

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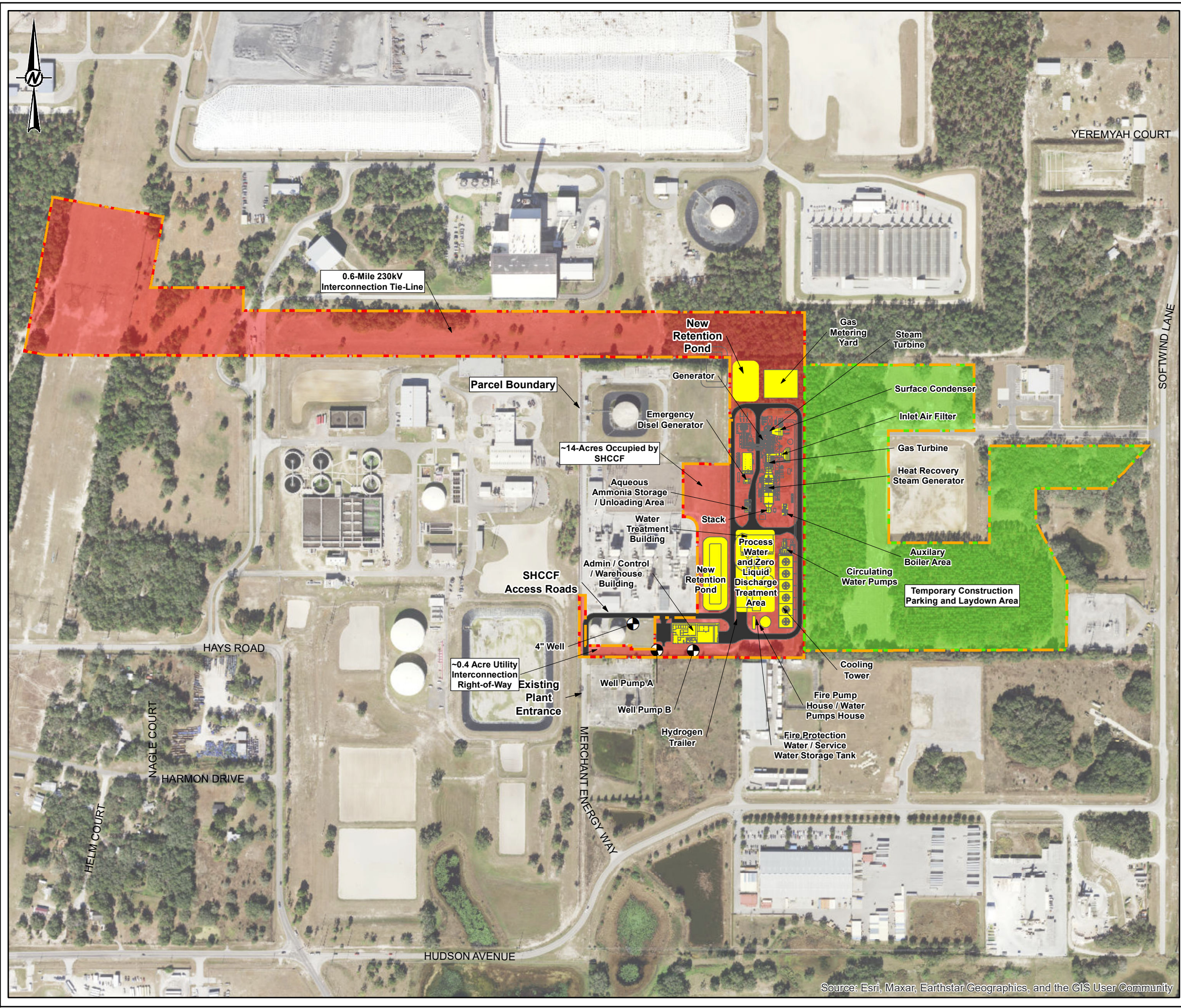
REFERENCE(S)
 EXISTING FACILITY FENCELINE, CERTIFIED SITE BOUNDARY, SHCCF PROJECT, GOLDER ASSOCIATES INC., 2017
 PARCEL BOUNDARY, PASCO COUNTY, 2017
 SHCCF MAJOR COMPONENTS, POWER ENGINEERS, 2017

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 CONCEPTUAL RENDERING OF
 SHCCF AND EXISTING SHGS

CONSULTANT	YYYY-MM-DD	2023-05-09
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	RAZ
	APPROVED	MM



- LEGEND**
- Existing Well Locations (Approximate) (Not Being Certified)
 - SHCCF Layout
 - SHCCF Major Components
 - SHCCF Access Roads
 - Temporary Construction Parking and Laydown Area (Not Being Certified)
 - Area to be Certified
 - ~14-Acres Occupied by SHCCF
 - 0.6-Mile 230kV Interconnection Tie-Line
 - ~0.4-Acre Utility Interconnection Right-of-Way
 - SHCCF Project
 - ~14-Acres Occupied by SHCCF (To be Certified)
 - 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
 - ~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)
 - Temporary Construction Parking and Laydown Area (Not Being Certified)



NOTE(S)
 REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE SITE LAYOUT, THE CERTIFIED SITE BOUNDARY, AND TO CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

NOT INCLUDED IN SHCCF CERTIFIED SITE:
 ONSITE NATURAL GAS METERING STATION OWNED BY FLORIDA GAS TRANSMISSION
 THREE (3) ONSITE GROUNDWATER WELLS OWNED BY SHADY HILLS GENERATING STATION

REFERENCE(S)
 EXISTING FACILITY FENCELINE, CERTIFIED SITE, SHCCF PROJECT, WSP/GOLDER ASSOCIATES INC., 2018-2023.
 PARCEL BOUNDARY, PASCO COUNTY, 2023.
 SHCCF MAJOR COMPONENTS, POWER ENGINEERS, 2018.

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

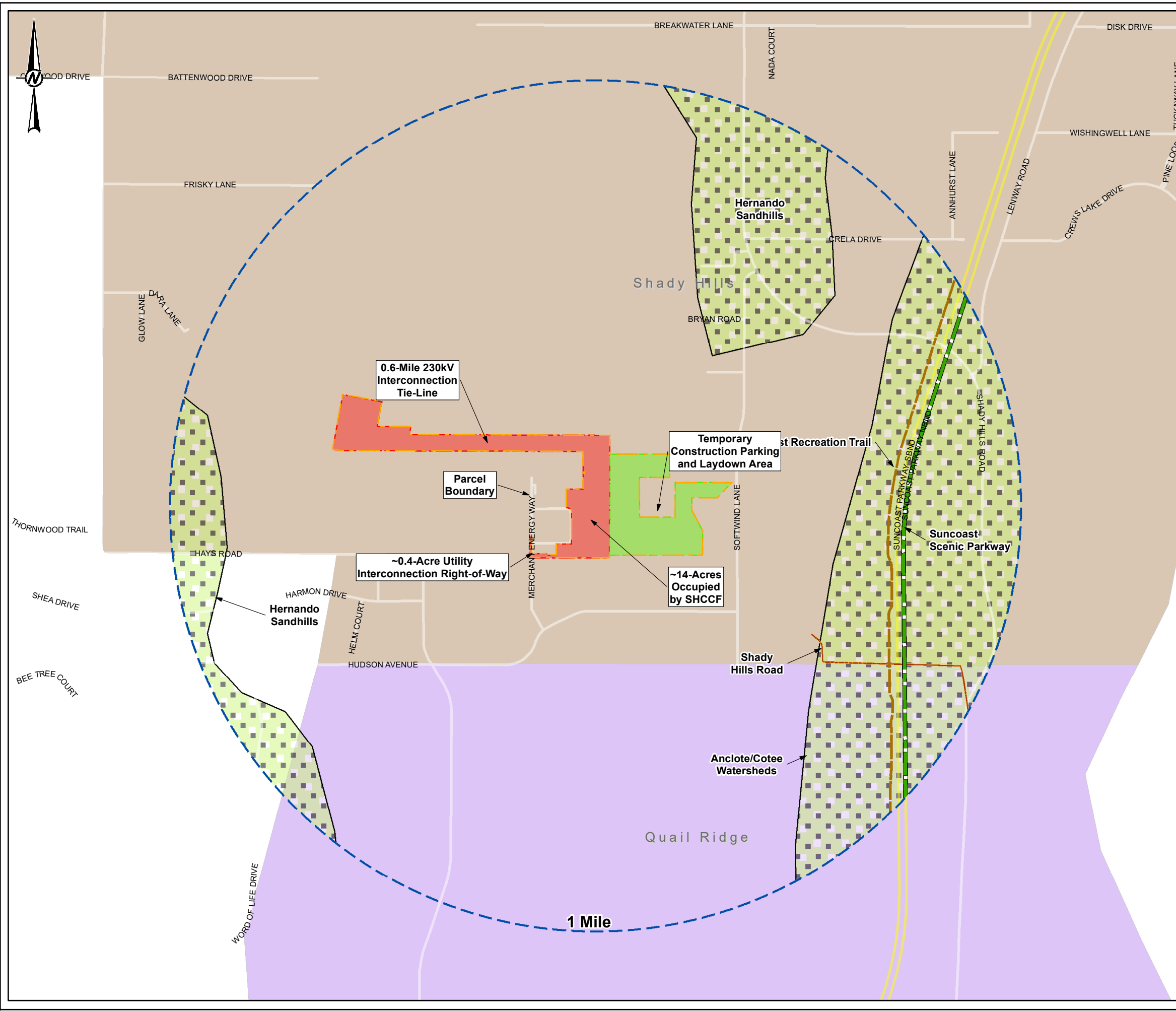
PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 SHCCF SITE MAJOR COMPONENTS

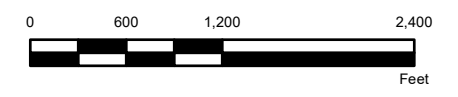
CONSULTANT	DATE	REVISION
	YYYY-MM-DD	2023-05-09
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	RAZ
	APPROVED	MM

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



- LEGEND**
- Temporary Construction Parking and Laydown Area (Not Being Certified)
 - Area to be Certified
 - ~14-Acres Occupied by SHCCF
 - 0.6-Mile 230kV Interconnection Tie-Line
 - ~0.4 Acre Utility Interconnection Right-of-Way
 - SHCCF Project
 - ~14-Acres Occupied by SHCCF (To be Certified)
 - 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
 - ~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)
 - Temporary Construction Parking and Laydown Area (Not Being Certified)
 - Trails
 - Scenic Byways
 - Historical Resource Groups
 - Ecological Planning Units (County)
- Census Designated Places**
- Quail Ridge
 - Shady Hills
 - Un-Incorporated Pasco County



NOTE(S)
 REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY, AND TO CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

REFERENCE(S)
 ECOLOGICAL PLANNING UNITS, PASCO COUNTY, 2017
 SCENIC BYWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION, 2023
 TRAILS, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2022
 HISTORICAL RESOURCE GROUPS, BUREAU OF ARCHAEOLOGICAL RESEARCH FLORIDA MASTER SITE FILE, 2017

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

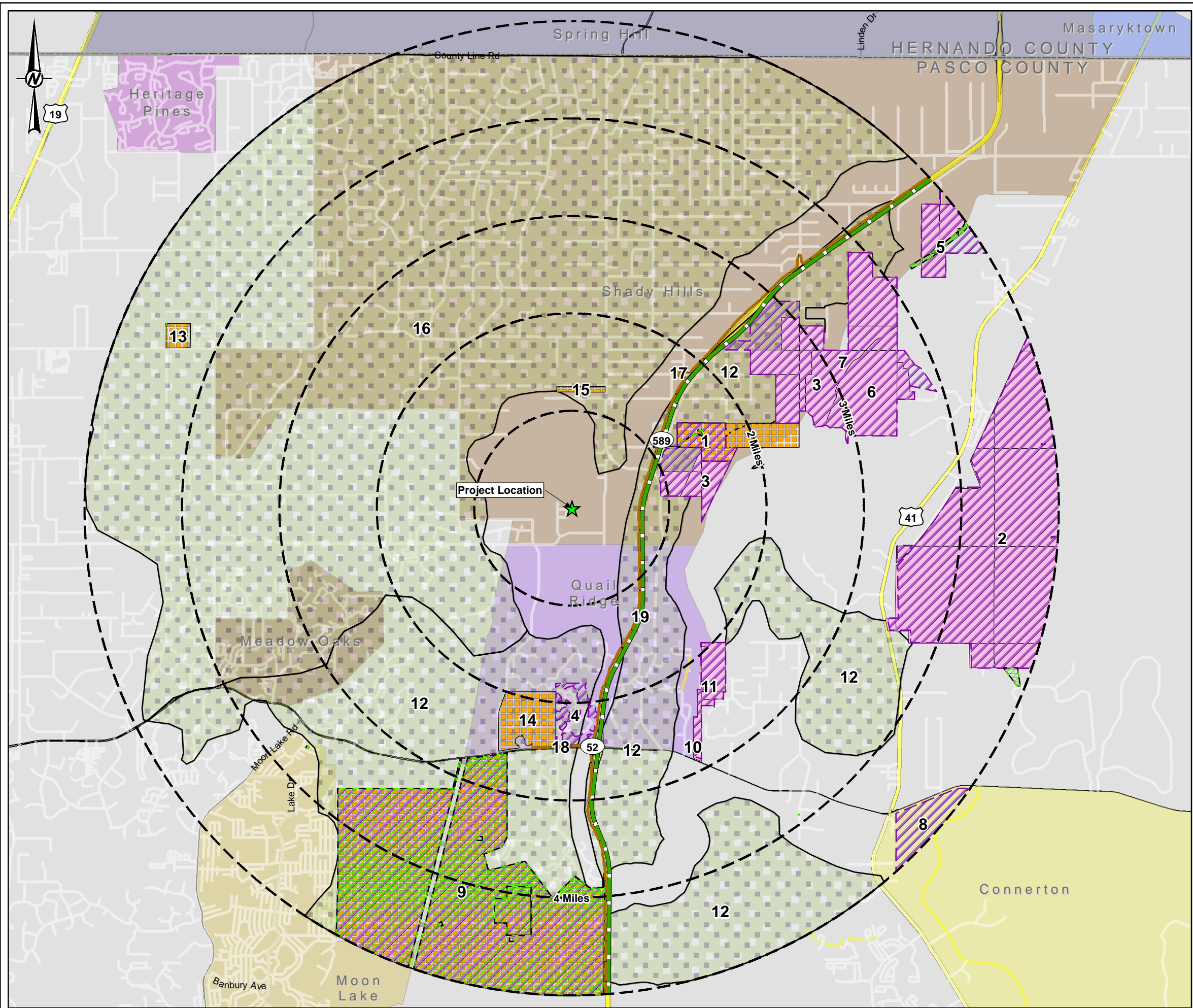
PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 GOVERNMENTAL JURISDICTIONS
 WITHIN 1-MILE RADIUS OF SHCCF

CONSULTANT	YYYY-MM-DD	2023-05-09
DESIGNED	NRL	
PREPARED	GFD	
REVIEWED	KB	
APPROVED	RAZ	

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B 118

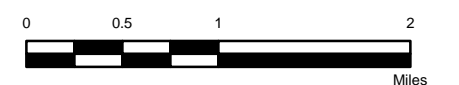


LEGEND

- ★ Project Location
- Historic Bridges (State)
- Trails (State)
- Scenic Byways (State)
- ▨ SWFWMD Owned Lands (WMD)
- ▨ Florida Managed Lands (State)
- ▨ Parks (County)
- ▨ Conservation Lands (State)
- ▨ Ecological Planning Units (County)

County Designated Places

- ▨ Connerton
- ▨ Heritage Pines
- ▨ Masaryktown
- ▨ Meadow Oaks
- ▨ Moon Lake
- ▨ Quail Ridge
- ▨ Shady Hills
- ▨ Spring Hill
- ▨ Un-Incorporated Hernando County
- ▨ Un-Incorporated Pasco County



NOTE(S)
SEE TABLES 3.2.1-2A AND 3.2.1-2B FOR GOVERNMENTAL JURISDICTION INFORMATION

REFERENCE(S)
SCENIC BYWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION, 2022
TRAILS, CONSERVATION LANDS, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2021
HISTORIC BRIDGES, BUREAU OF ARCHAEOLOGICAL RESEARCH FLORIDA MASTER SITE FILE, 2023
FLORIDA MANAGED LANDS, FLORIDA CONSERVATION LANDS, FLORIDA NATURAL AREAS INVENTORY, 2023
ECOLOGICAL PLANNING UNITS, PASCO COUNTY, 2017

CLIENT
SHADY HILLS ENERGY CENTER, LLC

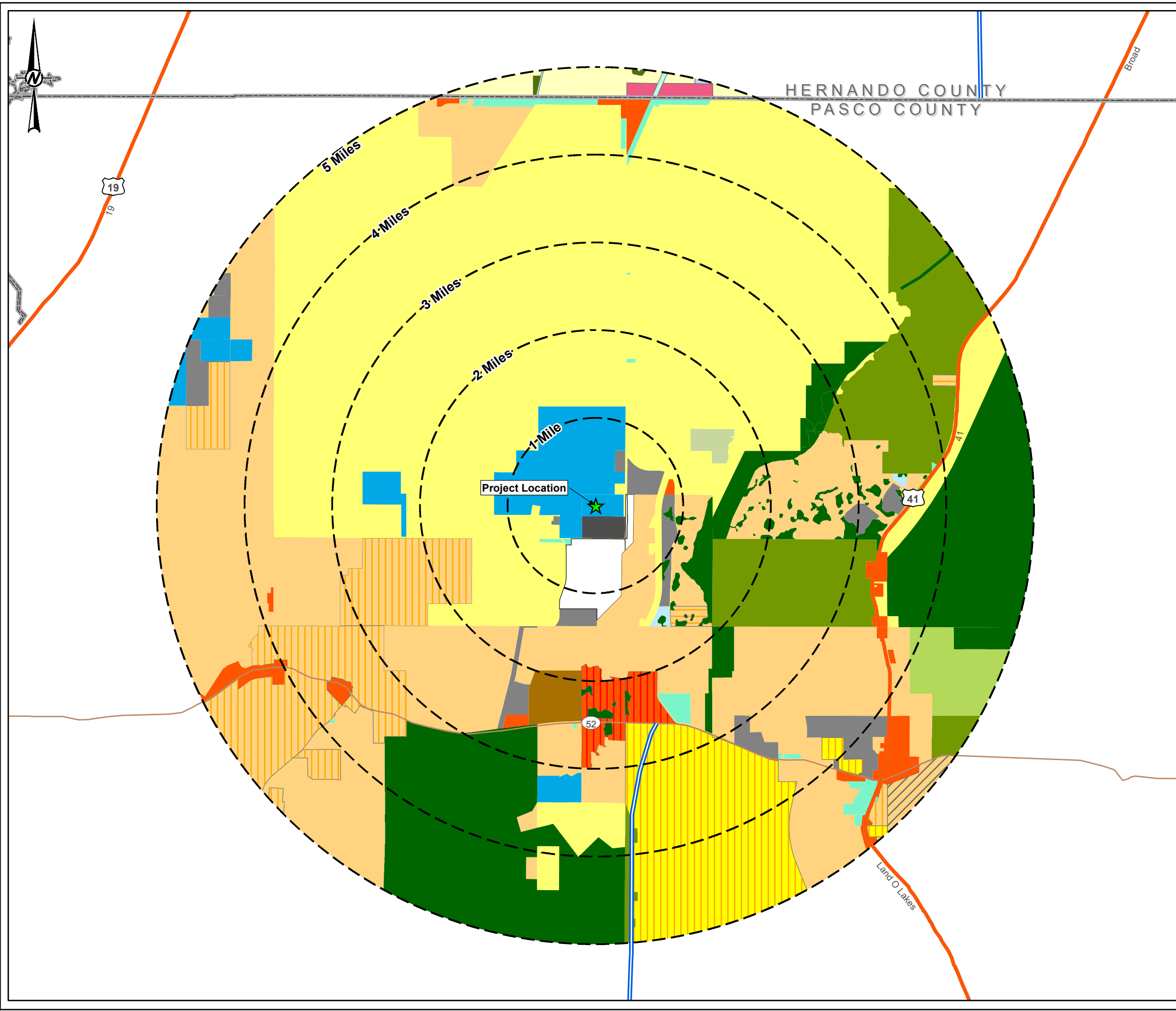
PROJECT
SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
**GOVERNMENTAL JURISDICTIONS WITHIN
1-, 2-, 3-, 4- AND 5-MILE RADIUS OF SHCCF**

CONSULTANT	DATE	REVISION
	YYYY-MM-DD	2023-05-09
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	KB
	APPROVED	RAZ

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



LEGEND

- ★ Project Location

Future Land Use - Pasco County

- AG - AGRICULTURAL-1 du/ga*
- AG/R - AGRICULTURAL/RURAL-2 du/ga*
- AT - MAJOR ATTRACTORS
- COM - COMMERCIAL
- CON - CONSERVATION LANDS
- EC - EMPLOYMENT CENTER
- IH - INDUSTRIAL-HEAVY
- IL - INDUSTRIAL-LIGHT
- MU - MIXED USES
- NT - NEWTOWN
- OFF - OFFICE
- P/SP - MAJOR PUBLIC/SEMI-PUBLIC
- PD - PLANNED DEVELOPMENT
- R/OS - MAJOR RECREATION/OPEN SPACE
- RES-1 - RESIDENTIAL-1 du/ga*
- RES-12 - RESIDENTIAL-12 du/ga*
- RES-3 - RESIDENTIAL-3 du/ga*
- RES-6 - RESIDENTIAL-6 du/ga*
- ROR - RETAIL/OFFICE/RESIDENTIAL

Future Land Use - Hernando County

- Commercial
- Education
- Public Facility
- Recreation
- Residential

0 0.5 1 2
Miles


NOTE(S)
* du / ga = DWELLING UNITS PER GROSS ACRE

REFERENCE(S)
FUTURE LAND USE, PASCO COUNTY AND HERNANDO COUNTY, 2017

CLIENT
SHADY HILLS ENERGY CENTER, LLC

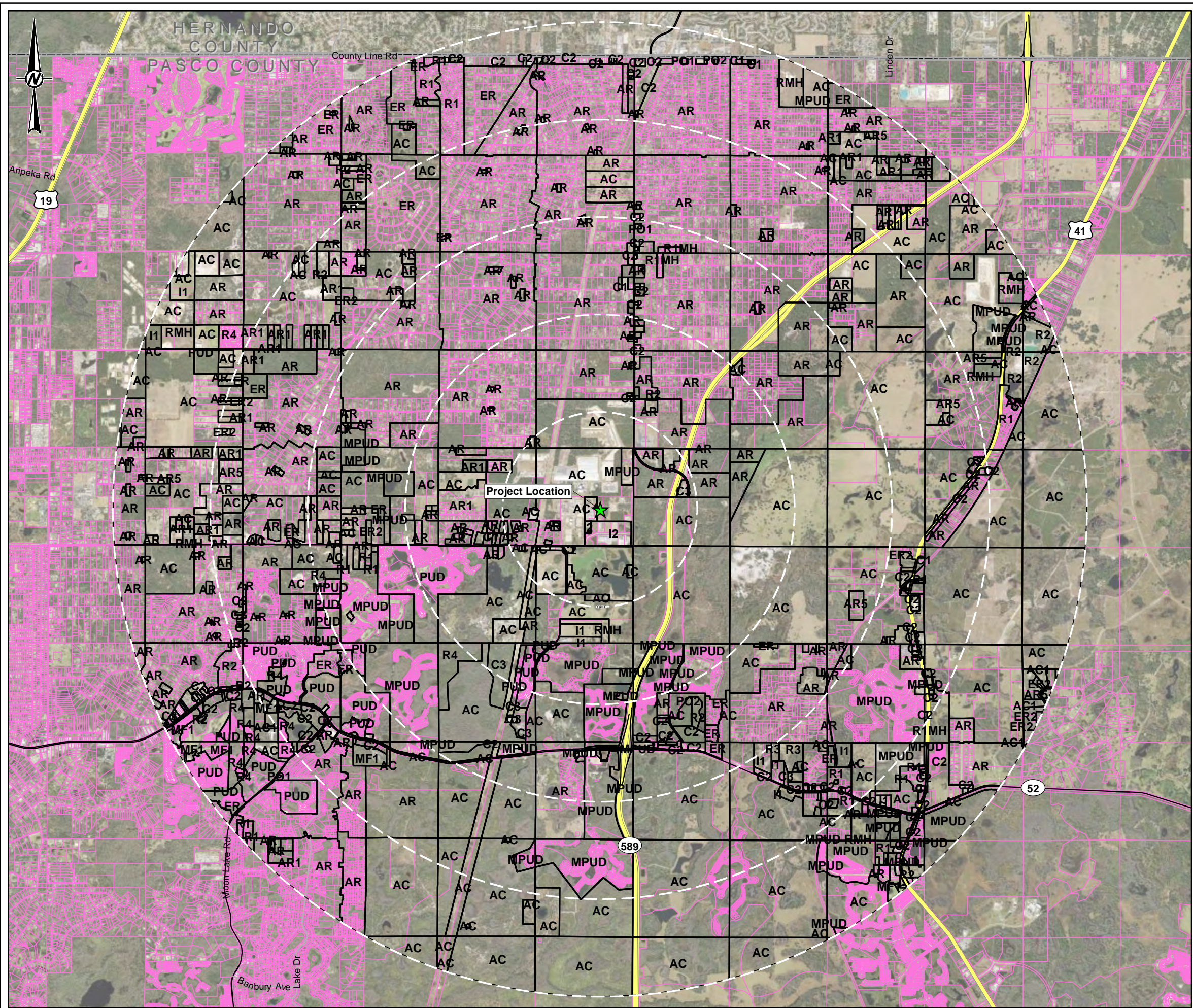
PROJECT
SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
FUTURE LAND USE
WITHIN 5-MILES OF SHCCF

CONSULTANT	YYYY-MM-DD	2023-06-08
	DESIGNED	NRL
	PREPARED	JGW
	REVIEWED	KB
	APPROVED	RAZ

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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



- LEGEND**
- Parcels
 - Pasco Un-Incorporated Zoning
 - AC - Agricultural District
 - AC1 - Agricultural District
 - AR - Agricultural-Residential District
 - AR1 - Agricultural-Residential District
 - AR5 - Agricultural-Residential District
 - C1 - Neighborhood Commercial District
 - C2 - General Commercial District
 - C3 - Commercial/Light Manufacturing District
 - ER - Estate-Residential District
 - ER2 - Estate-Residential District
 - I1 - Light Industrial Park District
 - I2 - Light Industrial Park District
 - MF1 - Multiple Family Medium Density District
 - MPUD - Master Planned Unit Development District
 - PO1 - Professional Office District
 - PO2 - Professional Office District
 - PUD - Planned Unit Development District
 - R1 - Rural Density Residential District
 - R1MH - Mobile Home District
 - R2 - Low Density Residential District
 - R3 - Medium Density Residential District
 - R4 - High Density Residential District
 - RMH - Mobile Home District




NOTE(S)
 REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY AND CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

REFERENCE(S)
 ZONING, PARCELS, PASCO COUNTY, 2023

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

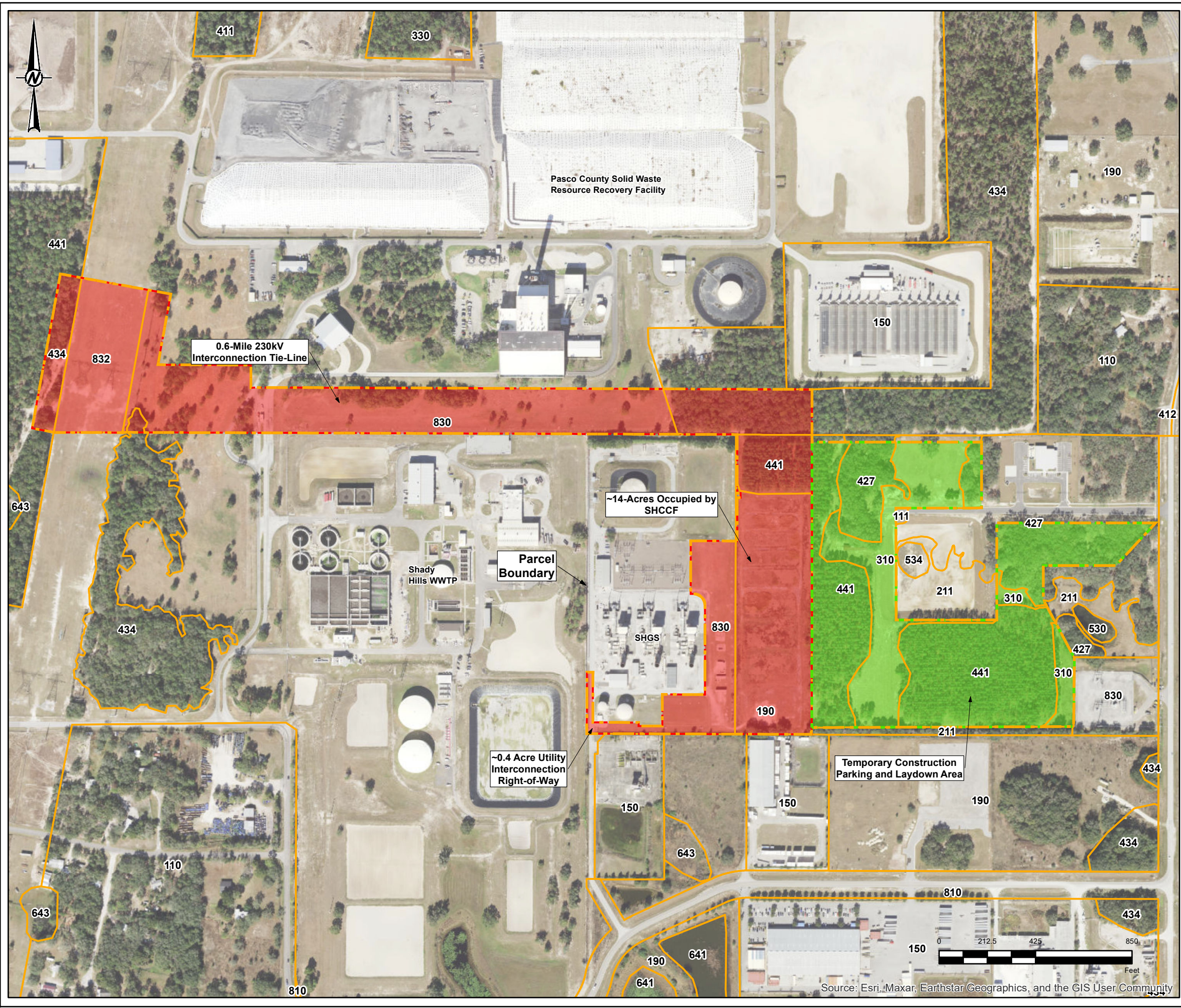
PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 PASCO COUNTY ZONING
 WITHIN 5-MILE RADIUS OF SHCCF

CONSULTANT	DATE	REVISION
	YYYY-MM-DD	2023-05-09
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	KB
	APPROVED	RAZ

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



- LEGEND**
- Temporary Construction Parking and Laydown Area (Not Being Certified)
 - Area to be Certified
 - ~14-Acres Occupied by SHCCF
 - 0.6-Mile 230kV Interconnection Tie-Line
 - ~0.4-Acre Utility Interconnection Right-of-Way
 - SHCCF Project
 - ~14-Acres Occupied by SHCCF (To be Certified)
 - 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
 - ~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)
 - Land Use
 - 110 - Residential Low Density < 2 Dwelling Units
 - 111 - Fixed Single Family Units
 - 150 - Biosolids Facility (Under Construction)
 - 150 - Industrial
 - 170 - Institutional
 - 190 - Open Land
 - 211 - Improved Pasture
 - 310 - Herbaceous (Dry Prairie)
 - 330 - Mixed Rangeland
 - 411 - Pine Flatwoods
 - 412 - Longleaf Pine - Xeric Oak
 - 427 - Live Oak Hammock
 - 434 - Mixed Hardwood Conifer Forest
 - 441 - Pine Plantations
 - 530 - Reservoirs
 - 534 - Reservoirs < 10 Acres
 - 641 - Freshwater Marshes
 - 643 - Wet Prairies
 - 653 - Intermittent Ponds
 - 740 - Disturbed Land
 - 830 - Utilities
 - 832 - Electrical Power Transmission Lines

NOTE(S)
 REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY AND CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

REFERENCE(S)
 LAND USE, SWFWMD, 2011 (WITH REVISIONS BY GOLDER BASED ON FIELD RECONNAISSANCE NOVEMBER, 2017 AND JANUARY, 2023)

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

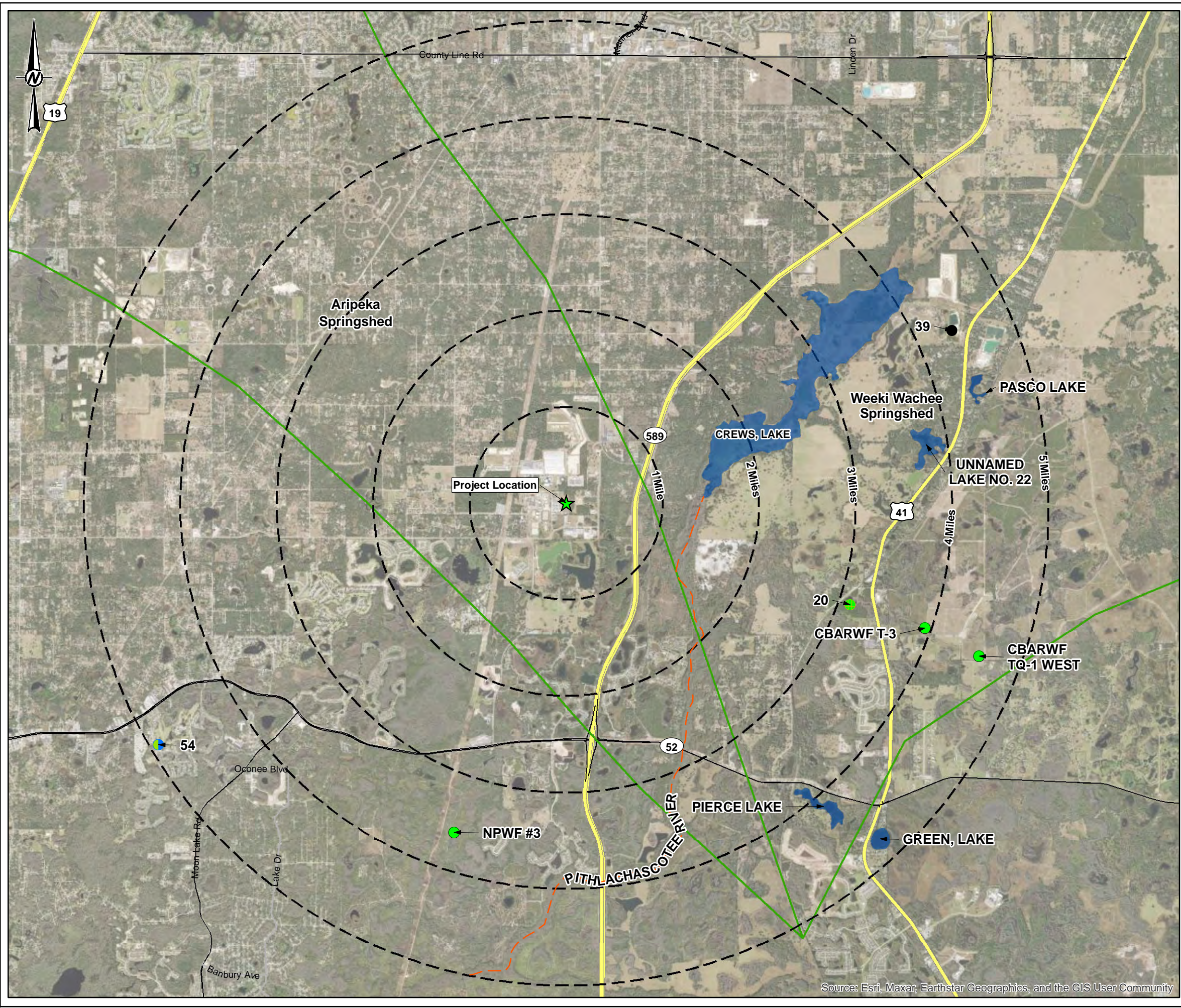
TITLE
 SHCCF VEGETATION / LAND USE (FLUCCS LEVEL III)

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	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	KB
	APPROVED	RAZ

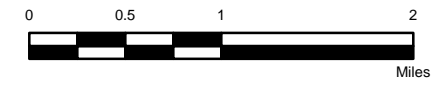
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



- LEGEND**
- ★ Project Location
 - Adopted Wetlands
 - - - Proposed Rivers
 - Adopted Lakes
 - Springshed Boundaries (Approximate)
- Water Use ¹**
- Un-Categorized
 - Agricultural
 - Landscape/Recreation



NOTE(S)
¹SEE TABLE 3.3.3-2 FOR SURFACE WATER WITHDRAWAL LOCATION INFORMATION

REFERENCE(S)
 ADOPTED WETLANDS, RIVERS, LAKES, AND WELL LOCATIONS, SWFWMD, 2017
 SPRINGSHED BOUNDARY, SWFWMD, 2013

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 WATERBODIES WITHIN 5-MILES OF THE SHCCF

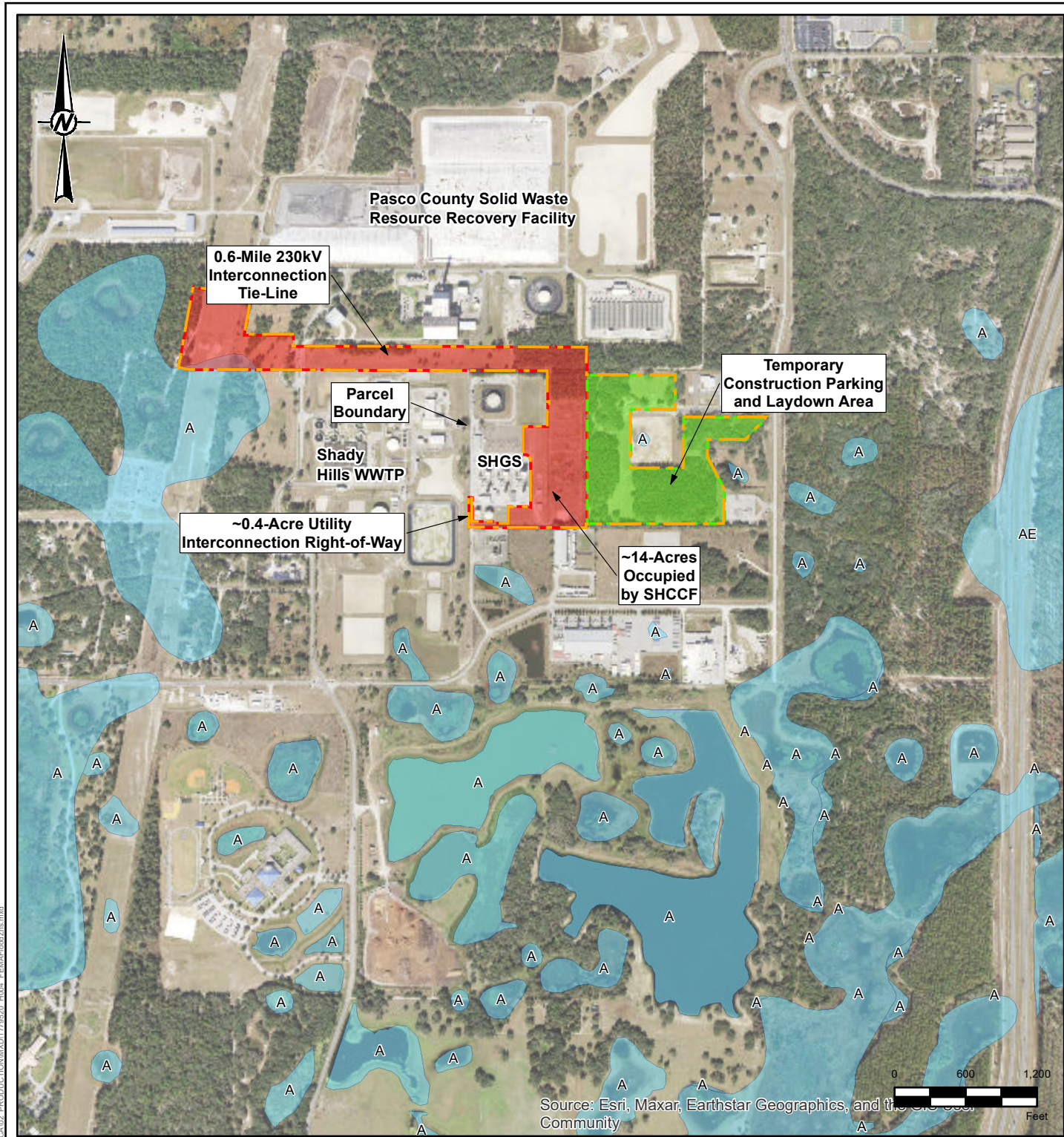
CONSULTANT	YYYY-MM-DD	2023-05-09
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	GP
	APPROVED	MM

PROJECT NO. 31405228.001	CONTROL B015	REV. 0	FIGURE 9
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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



LEGEND

- Temporary Construction Parking and Laydown Area (Not Being Certified)
- Area to be Certified
 - ~14-Acres Occupied by SHCCF
 - 0.6-Mile 230kV Interconnection Tie-Line
 - ~0.4 Acre Utility Interconnection Right-of-Way
- SHCCF Project
 - ~14-Acres Occupied by SHCCF (To be Certified)
 - 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
 - ~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)
 - Temporary Construction Parking and Laydown Area (Not Being Certified)

■ 100-Year Flood Zone

A - Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

AE - Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

NOTE(S)

REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY, AND TO CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

REFERENCE(S)

SHCCF PROJECT, CERTIFIED SITE BOUNDARY, WSP/GOLDER ASSOCIATES INC., 2018-2023
 PARCEL BOUNDARY, PASCO COUNTY, 2023
 FLOOD ZONES, FEMA, 2021

CLIENT

SHADY HILLS ENERGY CENTER, LLC

PROJECT

SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE

**SHCCF
 FEMA FLOOD ZONES**

CONSULTANT



YYYY-MM-DD	2023-05-09
DESIGNED	NRL
PREPARED	GFD
REVIEWED	RAZ
APPROVED	MM

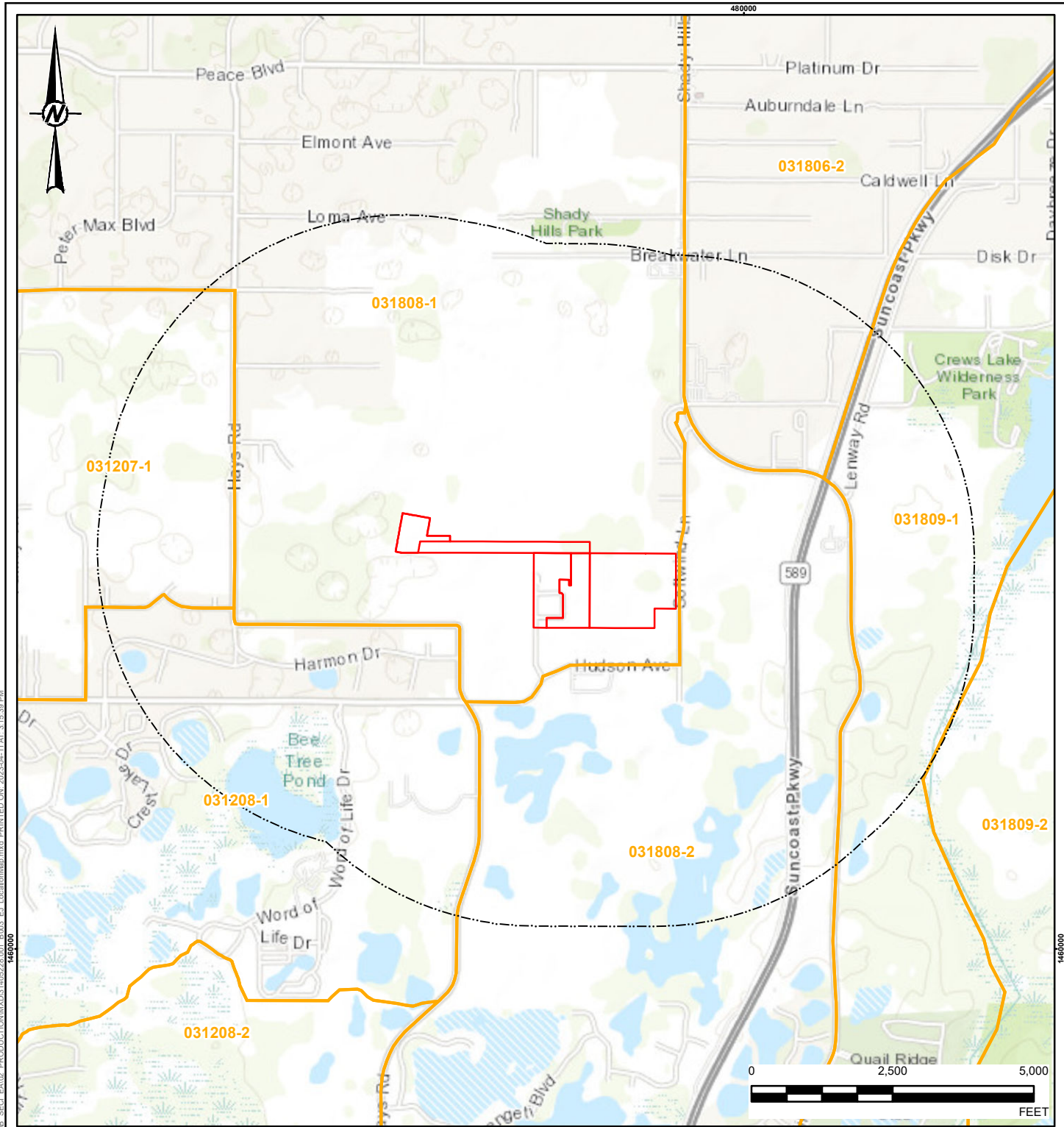
PROJECT NO.
31405228.001

CONTROL
B014

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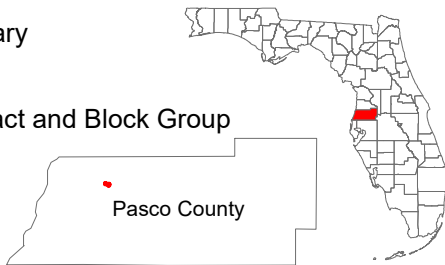
FIGURE
10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI/A



LEGEND

- Project Boundary
- 1-Mile Buffer
- US Census Tract and Block Group Boundaries



REFERENCE(S)

COORDINATE SYSTEM: NAD 1983 STATEPLANE FLORIDA WEST FIPS 0902 FEET
 PROJECTION: TRANSVERSE MERCATOR
 DATUM: NORTH AMERICAN 1983

SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP, GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
SEMINOLE ELECTRIC COOPERATIVE INC.

PROJECT
**SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)
 ENVIRONMENTAL ASSESSMENT**

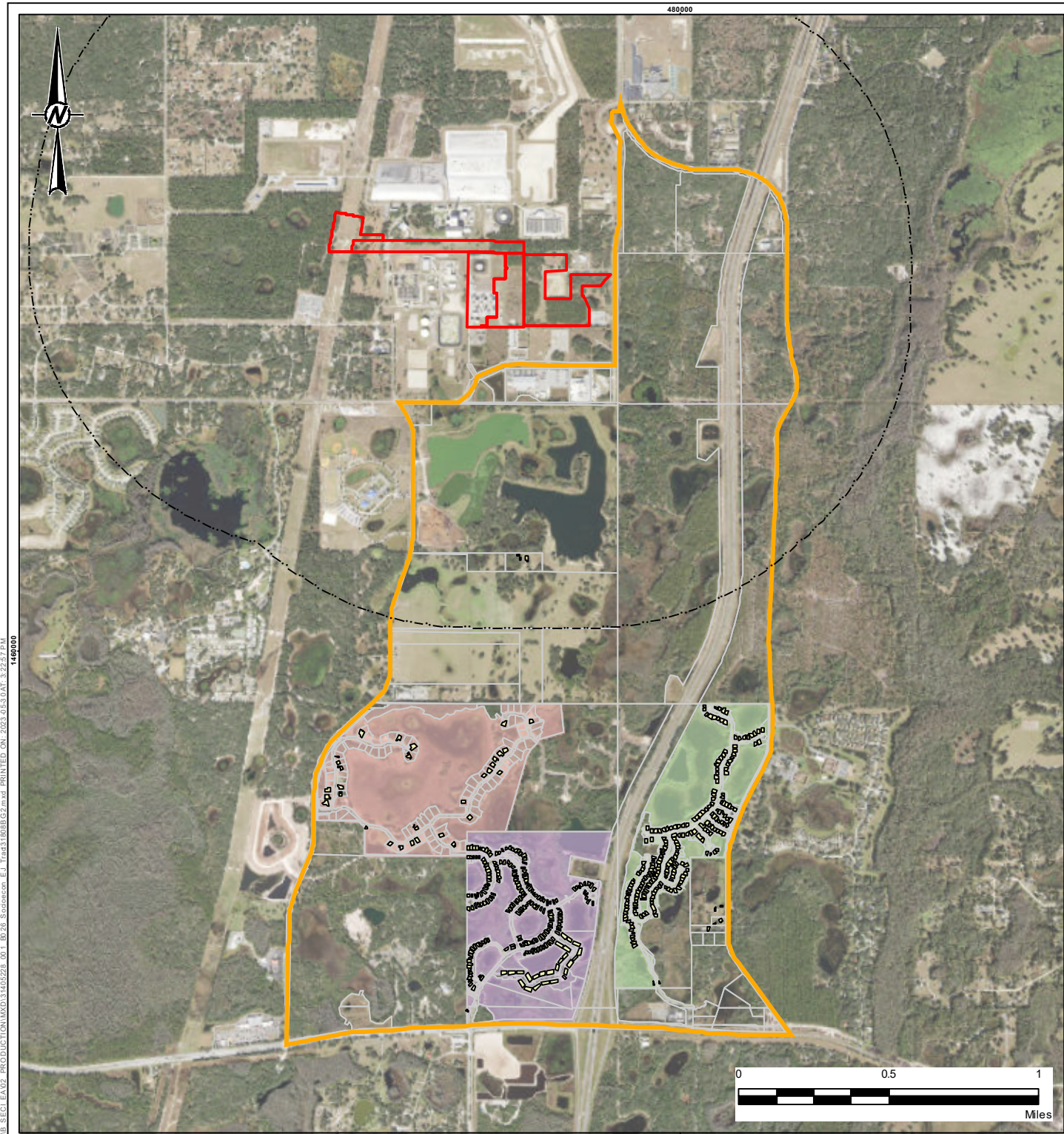
TITLE
ENVIRONMENTAL JUSTICE LOCATION MAP

CONSULTANT	YYYY-MM-DD	2023-04-11
	DESIGNED	GFD
	PREPARED	GFD
	REVIEWED	RAZ
	APPROVED	MM

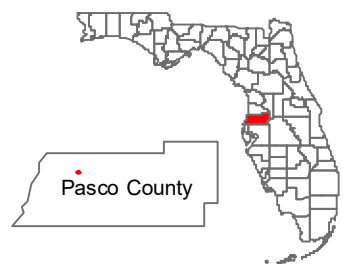
PROJECT NO.	CONTROL	REV.	FIGURE
31405228.001	B003	0	11

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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A



- LEGEND**
- Census Tract 318.08 BG2
 - Parcels
 - Project Boundary
 - Residential Structures
 - 1-Mile Buffer
- Neighborhood Subdivisions**
- Deerfield Lakes of Pasco
 - Lone Star Ranch - HOA
 - Serengeti - HOA



REFERENCE(S)
 CENSUS BLOCK: NATIONAL GEOSPATIAL DATA ASSET - USCB 2023.
 PARCELS: PASCO COUNTY, 2023.
 PROJECT BOUNDARY: WSP/GOLDER ASSOCIATES INC., 2018-2023.
 RESIDENTIAL STRUCTURES: ESRI 2022.
 SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY
 COORDINATE SYSTEM: NAD 1983 STATE PLANE FLORIDA WEST FIPS 0902 FEET

CLIENT
SEMINOLE ELECTRIC COOPERATIVE INC.

PROJECT
**SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)
 ENVIRONMENTAL ASSESSMENT**

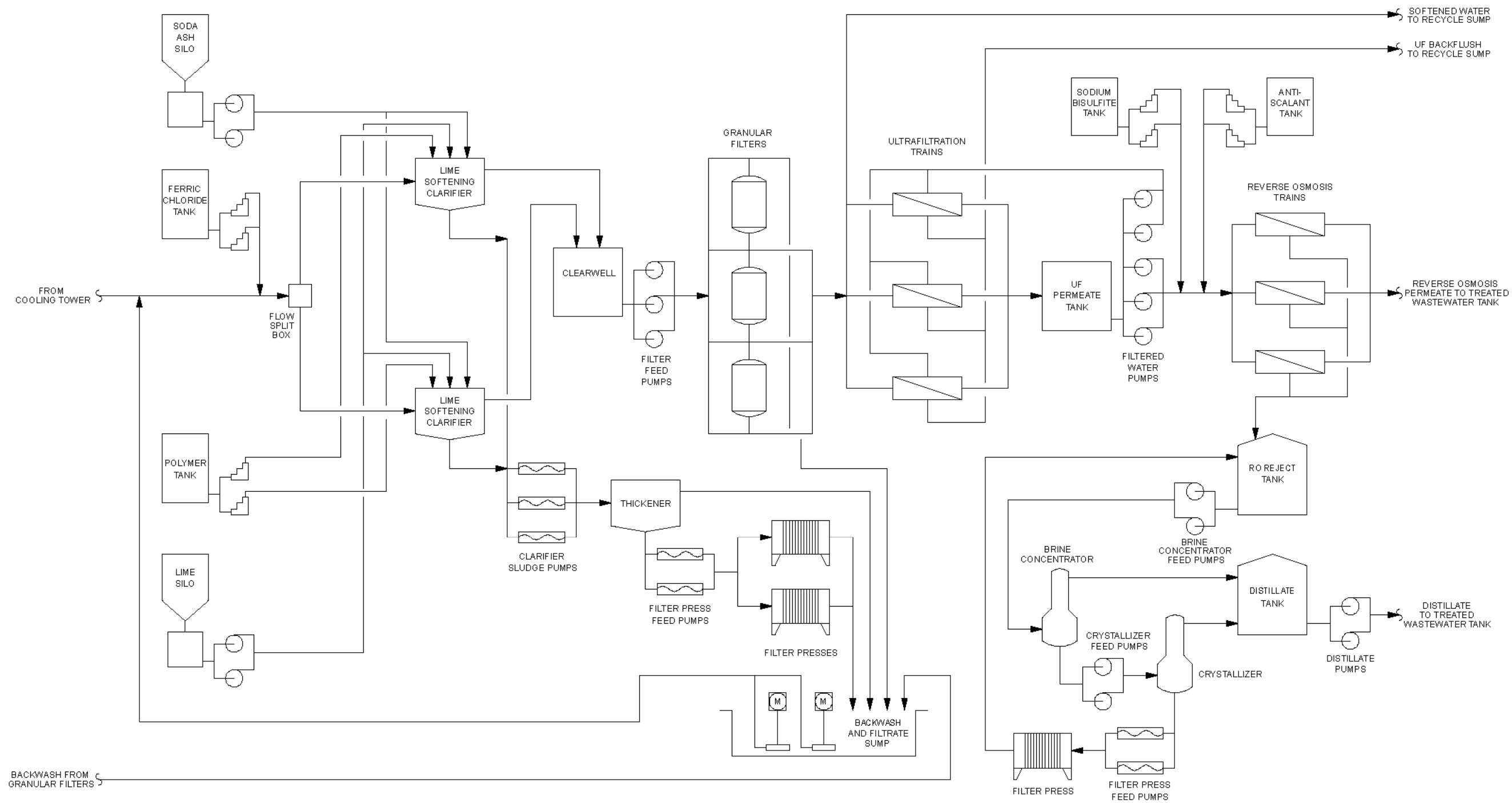
TITLE
**ENVIRONMENTAL JUSTICE LOCATION MAP
 CENSUS TRACT 318.08 BG2**

CONSULTANT	YYYY-MM-DD	2023-05-26
	DESIGNED	GFD
	PREPARED	BME
	REVIEWED	RAZ
	APPROVED	MM

PROJECT NO.	CONTROL	REV.	FIGURE
31405228.001	B026	0	12

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIA



CLIENT
SHADY HILLS ENERGY CENTER, LLC

PROJECT
SHADY HILLS COMBINED CYCLE FACILITY

CONSULTANT



YYYY-MM-DD 2023-05-09

PREPARED NRL

DESIGN GFD

REVIEW RAZ

APPROVED MM

TITLE

PROCESS FLOW DIAGRAM

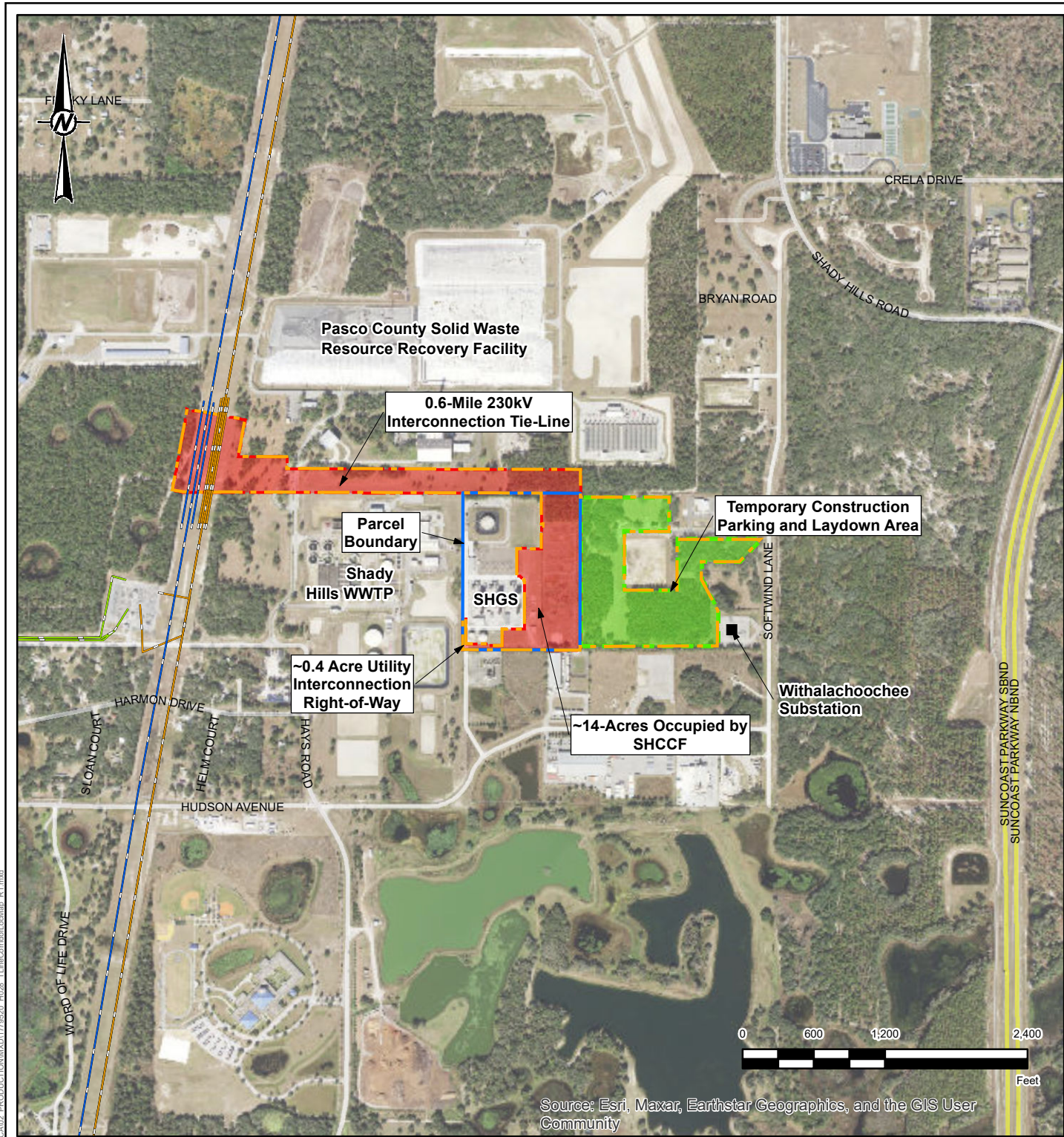
PROJECT No.
31405228.001

CONTROL
B019

Rev.
0

FIGURE
13

1 in IF THE MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

LEGEND

Existing Transmission

- 115 kV
- 230 kV
- 500 kV
- 30-Acre SHPC Parcel Boundary
- Temporary Construction Parking and Laydown Area (Not Being Certified)
- Area to be Certified

0.6-Mile 230kV Interconnection Tie-Line

~0.4-Acre Utility Interconnection Right-of-Way

 SHCCF Project

~14-Acres Occupied by SHCCF (To be Certified)

0.6-Mile 230kV Interconnection Tie-Line (To be Certified)

~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)

Temporary Construction Parking and Laydown Area (Not Being Certified)

NOTE(S)

REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY AND CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

REFERENCE(S)

CERTIFIED SITE BOUNDARY, PROPOSED LAYDOWN AREA POWER ENGINEERS, 2018-2023.
PARCEL BOUNDARY, PASCO COUNTY, 2023.

CLIENT

SHADY HILLS ENERGY CENTER, LLC

PROJECT

SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE

230-KV INTERCONNECTION TIE-LINE CORRIDOR LOCATION MAP

CONSULTANT



YYYY-MM-DD 2023-05-19

DESIGNED NRL

PREPARED GFD

REVIEWED RAZ

APPROVED MM

PROJECT NO.
31405228.001

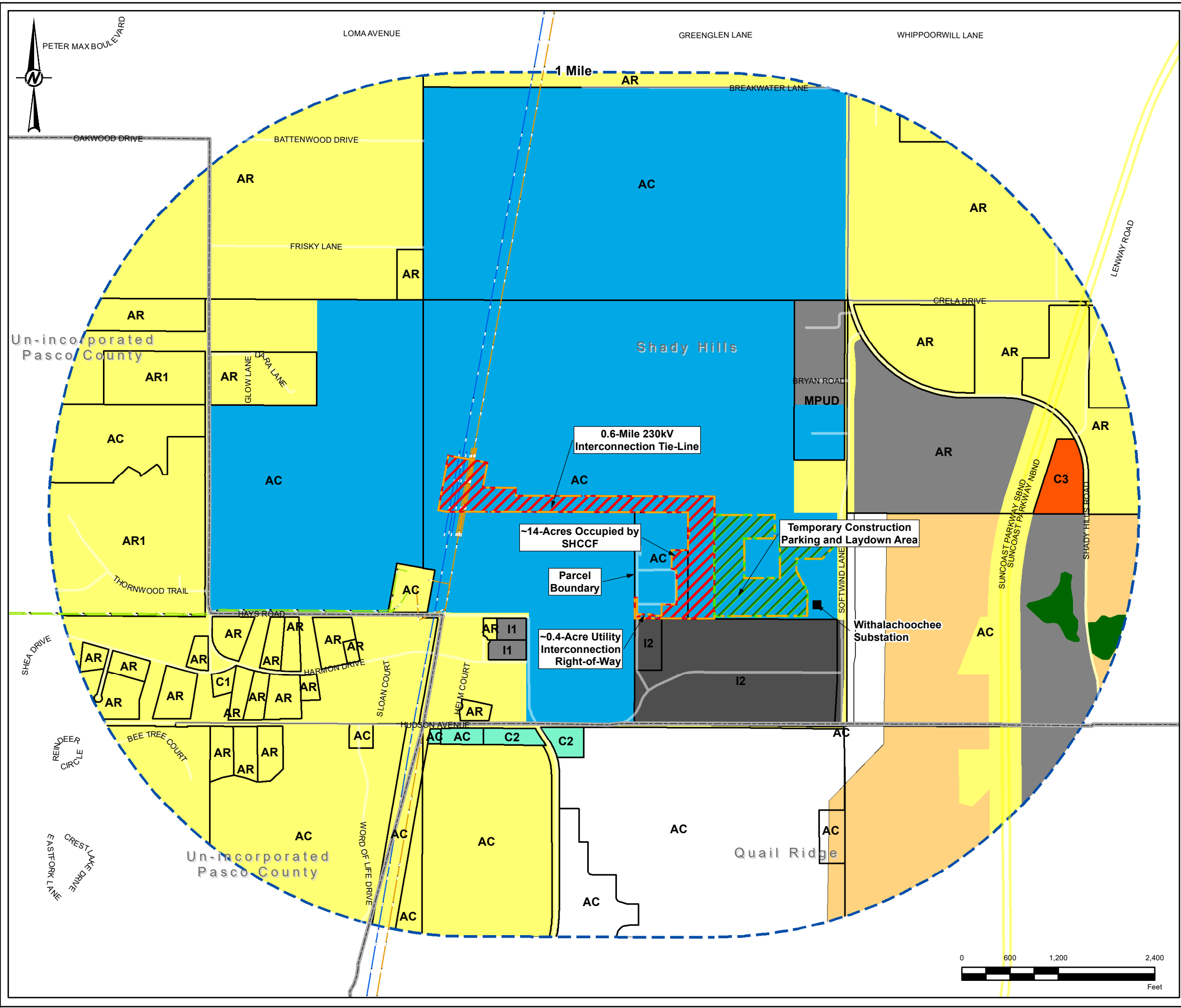
CONTROL
B022

REV.
0

FIGURE
14

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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A



LEGEND

- ~14-Acres Occupied by SHCCF
- 0.6-Mile 230kV Interconnection Tie-Line
- ~0.4-Acre Utility Interconnection Right-of-Way
- SHCCF Project
- Pasco Un-Incorporated Zoning
- AC - Agricultural District
- AR - Agricultural-Residential District
- AR1 - Agricultural-Residential District
- C1 - Neighborhood Commercial District
- C2 - General Commercial District
- C3 - Commercial/Light Manufacturing District
- I1 - Light Industrial Park District
- I2 - Light Industrial Park District
- MPUD - Master Planned Unit Development District
- PUD - Planned Unit Development District

Existing Transmission

- 115 kV
- 230 kV
- 500 kV

Future Land Use - Pasco County

- COM - COMMERCIAL
- CON - CONSERVATION LANDS
- EC - EMPLOYMENT CENTER
- IH - INDUSTRIAL-HEAVY
- IL - INDUSTRIAL-LIGHT
- P/SP - MAJOR PUBLIC/SEMI-PUBLIC
- RES-1 - RESIDENTIAL-1 du/ga*
- RES-3 - RESIDENTIAL-3 du/ga*
- ROR - RETAIL/OFFICE/RESIDENTIAL

NOTE(S)
 REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY AND CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

* DU / GA = DWELLING UNITS PER GROSS ACRE

REFERENCE(S)
 ZONING, FUTURE LAND USE, PASCO COUNTY, 2023 & 2017.

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

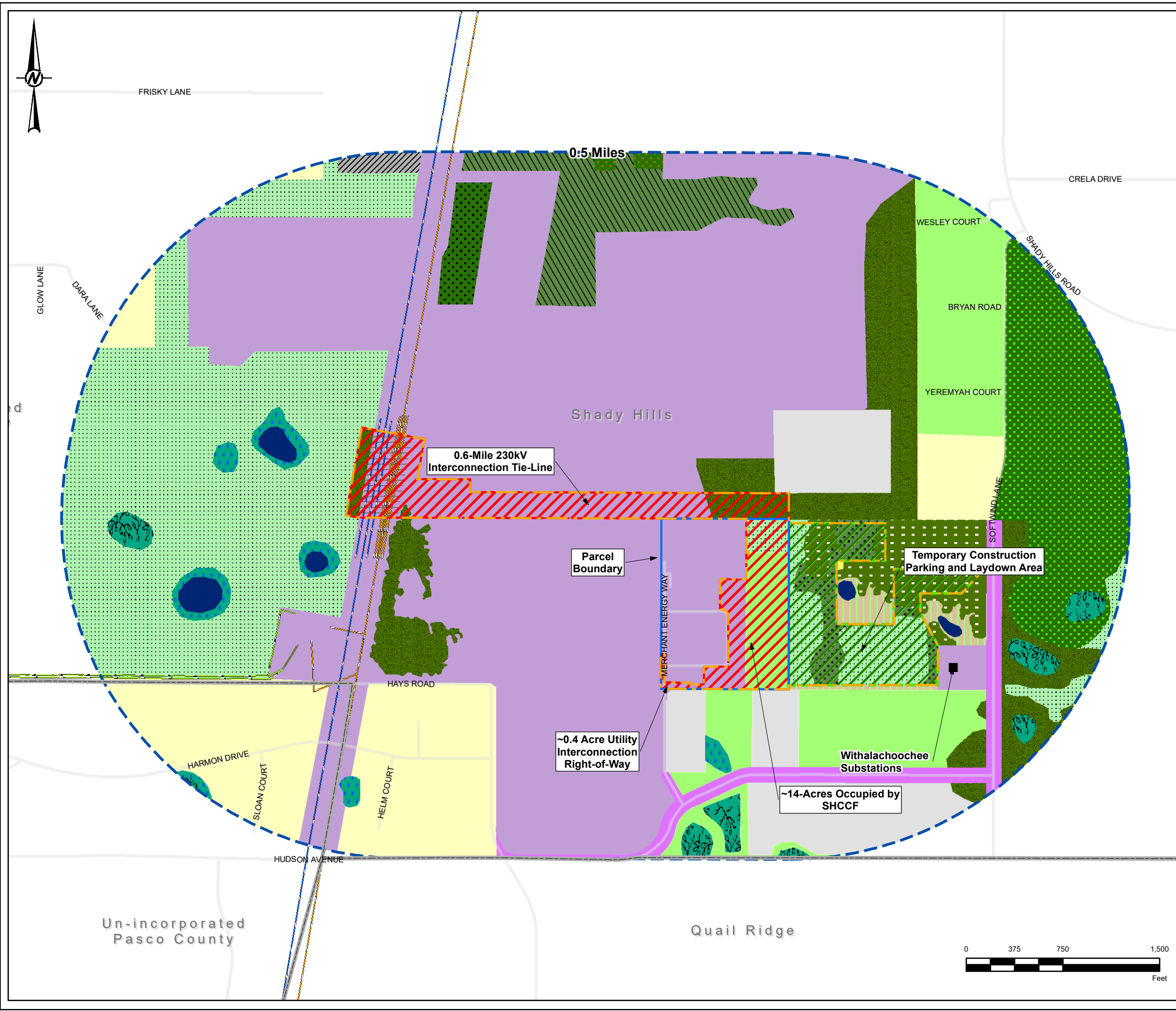
TITLE
 ZONING AND LAND USE WITHIN 1 MILE OF THE 230-KV INTERCONNECTION TIE LINE

CONSULTANT	YYYY-MM-DD	2018-06-21
DESIGNED	NRL	
PREPARED	GFD	
REVIEWED	MM	
APPROVED	MM	

G:\PROJECTS\Energy_Systems\Shady_Hills\09_Projects\1779520_Permits_Support\14_SCA\02_PRODUCTION\MXD\1779520_M023_Tie_Line_FutureZoning1Mile.mxd

1" IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B





LEGEND

- 30-Acre SHPC Parcel Boundary
- Temporary Construction Parking and Laydown Area (Not Being Certified)
- Area to be Certified
 - ~14-Acres Occupied by SHCCF
 - 0.6-Mile 230kV Interconnection Tie-Line
 - ~0.4-Acre Utility Interconnection Right-of-Way
- SHCCF Project
 - ~14-Acres Occupied by SHCCF (To be Certified)
 - 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
 - ~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)
 - Temporary Construction Parking and Laydown Area (Not Being Certified)

Existing Transmission

- 115 kV
- 230 kV
- 500 kV

Existing Land Use (FLUCCS Level III)

- Residential Low Density
- Low Density Single Family
- Industrial
- Open Land
- Improved Pasture
- Herbaceous
- Mixed Rangeland
- Upland Coniferous Forest
- Pine Flatwoods
- Longleaf Pine - Xeric Oak
- Live Oak
- Hardwood - Conifer Mixed
- Coniferous Plantations
- Reservoirs
- Freshwater Marshes
- Wet Prairies
- Disturbed Land
- Transportation
- Utilities
- Electrical Transmission Lines

NOTE(S)
 Rev. 1 - Figure revised to reflect changes in the certified site boundary and clarify that the temporary construction parking and laydown area is not within the Certified Project.

REFERENCE(S)
 LAND USE (FLUCCS LEVEL III), SWFWMD AND GOLDER ASSOCIATES, 2011 - 2017

CLIENT
 SHADY HILLS ENERGY CENTER, LLC

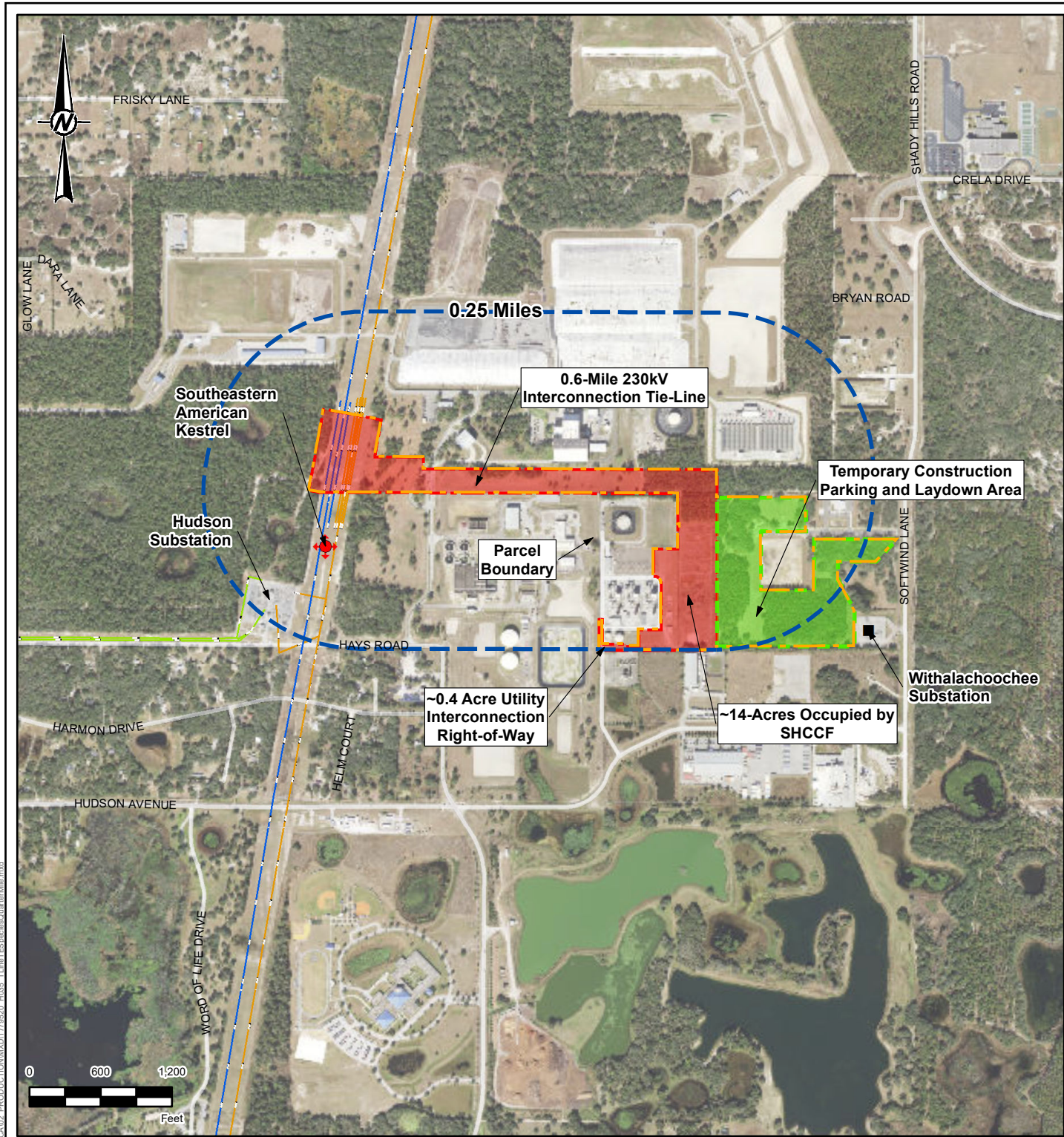
PROJECT
 SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
 230-kV INTERCONNECTION TIE-LINE VEGETATION/LAND USE

CONSULTANT	YYYY-MM-DD	2018-06-21
	DESIGNED	NRL
	PREPARED	GFD
	REVIEWED	KB
	APPROVED	MM

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



LEGEND

Existing Transmission

- 115 kV
- 230 kV
- 500 kV

Element Occurrences (2014)

- Animals
- ⊕ Point Indicates General Vicinity of Element
- Temporary Construction Parking and Laydown Area (Not Being Certified)

■ Area to be Certified

- ~14-Acres Occupied by SHCCF
- 0.6-Mile 230kV Interconnection Tie-Line
- ~0.4-Acre Utility Interconnection Right-of-Way
- SHCCF Project
- ~14-Acres Occupied by SHCCF (To be Certified)
- 0.6-Mile 230kV Interconnection Tie-Line (To be Certified)
- ~0.4-Acre Utility Interconnection Right-of-Way (To be Certified)
- Temporary Construction Parking and Laydown Area (Not Being Certified)

NOTE(S)

REV. 1 - FIGURE REVISED TO REFLECT CHANGES IN THE CERTIFIED SITE BOUNDARY AND CLARIFY THAT THE TEMPORARY CONSTRUCTION PARKING AND LAYDOWN AREA IS NOT WITHIN THE CERTIFIED PROJECT.

REFERENCE(S)

CERTIFIED SITE BOUNDARY, PROPOSED LAYDOWN AREA POWER ENGINEERS, 2018-2023.
 PARCEL BOUNDARY, PASCO COUNTY, 2023.
 ELEMENT OCCURRENCES, FNAI, 2014.

CLIENT

SHADY HILLS ENERGY CENTER, LLC

PROJECT

SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE

THREATENED AND ENDANGERED SPECIES WITHIN 1/4 MILE OF 230-kV INTERCONNECTION TIE-LINE

CONSULTANT



YYYY-MM-DD 2023-05-19

DESIGNED NRL

PREPARED GFD

REVIEWED RAZ

APPROVED MM

PROJECT NO.
31405228.001

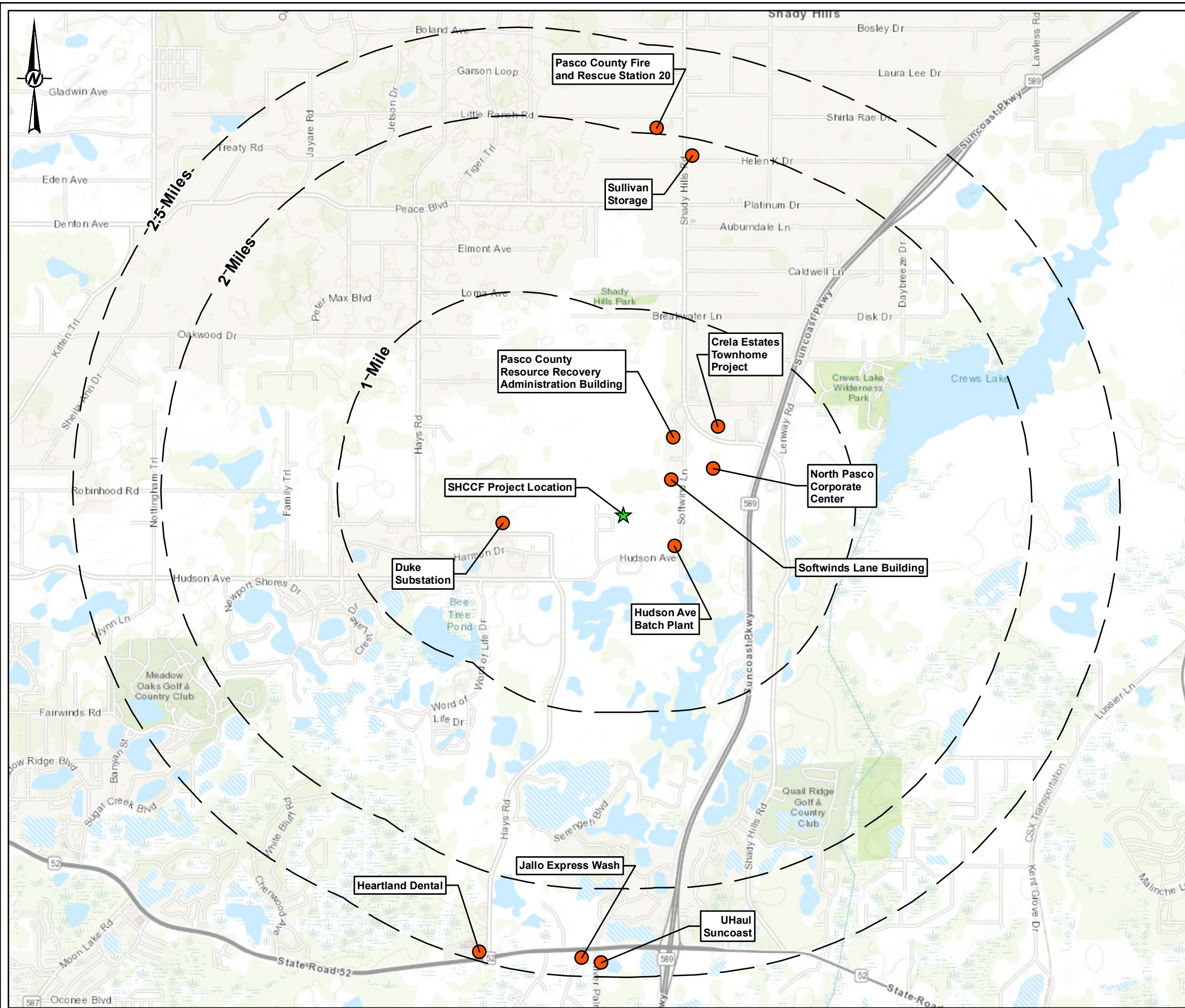
CONTROL
B025

REV.
0

FIGURE
17

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1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A



LEGEND

- ★ Project Location
- Pasco County Planned Developments

Projects located within 1 mile:

- Crela Estates Townhome Project – Residential
- Duke substation (to be located to the west of the transmission corridor)
- Hudson Avenue Batch Plant – Light Industry
- North Pasco Corporate Center – Commercial Building
- Pasco County Resource Recovery Administration Building – Administrative Office
- Softwind Lane Building – Industrial Building

Projects located within 2 miles:

- Pasco County Fire and Rescue Station 20 - Commercial Building
- Sullivan Storage - Commercial Building

Projects located within 2.5 miles:

- Heartland Dental - Commercial Building
- Jallo Express Wash - Commercial/Carwash
- UHaul Suncoast - Commercial Building

0 0.25 0.5 1 Miles

REFERENCE(S)


1. PROJECT LOCATION: WSP USA 2023
2. PLANNED DEVELOPMENT SITES: PASCO COUNTY PLANNING & DEVELOPMENT 2023
3. BASE MAP: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

COORDINATE SYSTEM: NAD 1983 STATEPLANE FLORIDA WEST FIPS 0902 FEET

CLIENT
SEMINOLE ELECTRIC COOPERATIVE INC.

PROJECT
SHADY HILLS COMBINED CYCLE FACILITY (SHCCF)

TITLE
PASCO COUNTY PLANNED DEVELOPMENT PROJECTS

CONSULTANT	YYYY-MM-DD	2023-08-04
	DESIGNED	BME
	PREPARED	GFD
	REVIEWED	KB
	APPROVED	RAZ

PROJECT NO. 31405228.001 CONTROL B028 REV. 0

FIGURE 18

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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DRAFT



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